Motion Picture Camera Service
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SERVICE:

- AZ Spectrum offers a wide range of accessories for professional motion picture cameras as well as many electronic modifications that can improve the work of your old gear. This catalog describes our products and modifications for Arriflex, Aaton, Bolex, Cinema Products, Eclair, and Moviecam cameras.

- Please e-mail or call us for our current list prices. For distributors and resellers of our products we offer a 10% discount. For film schools and students we offer a 5% discount.

- We can also build or customize electronics to your needs and specifications.

- We provide electronics repair services for movie cameras and accessories. You may send us your camera or other equipment for repair or modification via any method you prefer, such as UPS, FedEx, DHL, US Mail, Airborne Express, or any other carrier. Be certain to package your equipment with at least 4 inches of packing material (foam, air bubble rolls) between the item and the outside box and insure the shipping.

PAYMENT OPTIONS:

We accept the following payment methods for domestic and international orders:

- Cash in US dollars

- Check or Money Order - must be made in US dollars. All checks must clear before we ship.

- Credit Card: MasterCard, Visa, Discover, and American Express

- Bank Wire Transfer - the $25.00 processing fee will be included in the shipping charge. We will provide you with AZ Spectrum's bank account number and address.

WARRANTY:

- You have a limited one (1) year warranty for our products.

  AZ Spectrum warrants its products against defects in electronics or workmanship for a period of one (1) year after the date of delivery. During this period, AZ Spectrum will repair a defective part without charge to you. This warranty does not cover defects resulting from mechanical damage, accidents, damage while in transit to our location, misuse, use of excessive force, alterations, unauthorized repair, tampering, improper applied voltage or polarity, bad ground on an external device (AC in GND system), battery corrosion, fire, exposure to water or other liquids.

- You have a limited six (6) month warranty for repairs performed by us of your equipment.

  We warrant all electronic systems to be in good working condition for a period of six (6) months from the time of repair. Within that period, we will re-repair the equipment to good working order. We reserve the right to charge for parts and labor within the warranty period if there occurs failure of electronic components not related to the repair originally performed. This warranty does not cover defects resulting from mechanical damage, accidents, damage while in transit to our location, misuse, use of excessive force, alterations, unauthorized repair, tampering, improper applied voltage or polarity, bad ground on an external device (AC in GND system), battery corrosion, fire, exposure to water or other liquids.

CONTACT:

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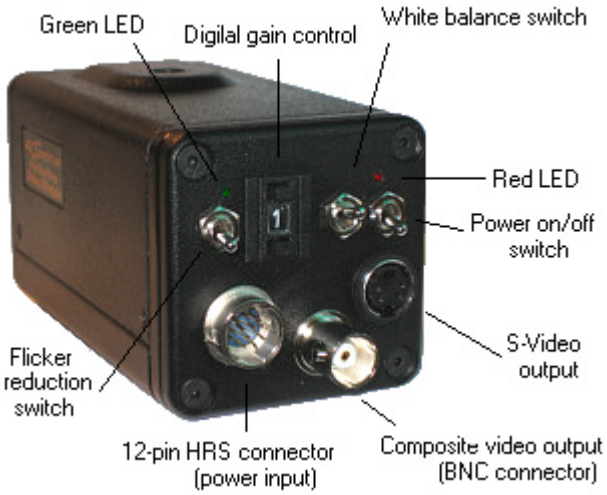
Flickerfree NTSC or PAL Color Video Assist

A video assist (video tap) is an accessory for a motion picture camera that provides a video feed from the camera lens. It is used to allow the director or operator to see on a video monitor or computer screen what is in the camera's frame without having to look through the viewfinder, as well as allowing video to be captured that can be used to create an immediate rough cut, if needed. If the motion picture camera runs at a frame per second rate (e.g. 24 fps) different from the video frame rate, NTSC: 29.97 fps, PAL: 25 fps, then the monitor image will flicker. The flickerfree video assist is designed to produce a 100% flickerfree monitor image for camera speeds ranging from 10 to 150 fps. A Sony CCD (Charge Coupled Device) solid stage EXview HAD (Hole Accumulated Diode) image sensor provides it with high resolution, high sensitivity and outstanding color fidelity. The computerized video assist electronics allows the image to be electronically flipped horizontally and/or vertically, which is useful when operating the unit with various video optics systems (different cameras, e.g. Arriflex or Aaton). This video assist can be supplied from a 12 V or 24 V battery (autoranging) and is equipped with a noise filter which provides a clear monitor image even if the camera motor is noisy. The low power consumption, only 220mA/12V or 130mA/24V, gives your camera battery a longer life.



Specifications:

- Picture area: 6.4 x 4.8 mm (1/2" Sony EXview HAD CCD Sensor)
- Signal system : NTSC or PAL
- Picture elements- NTSC: 811(H) x 508(V), PAL: 795(H) x 596(V) - high resolution
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal
- The image can be electronically flipped horizontally and/or vertically
- Flicker reduction: 100% for speeds from 10 fps to 150 fps
- Min. illumination: 0.5 Lux, F1.2, MG:4dB
- White balance: AWB(auto), 3200K and 5600K
- Gain Control: eight steps 0-14dB and AGC on/off set by decimal pushbutton switch
- Video outputs: BNC and S-video
- 12 V DC, 600mA output connector for a LCD monitor (4 pin accessory connector)
- Power requirement: 12 V DC or 24 V DC (autoranging)
- Power consumption: 3.1 W (220mA/12V, 130mA/24V)
- Operating temperature -5 to +113°F (-20 to +45°C)
- Body: black extruded aluminum
- Mount: C-mount or other
- Weight: 14 oz. (400g)
- Size: 4.3" x 2" x 2" (110mm x 51mm x 51mm)

Power on/off switch (2 position):
- Upper: the video assist is ON and the red LED is lit.
- Lower: power is OFF and the red LED is not lit.

White balance switch (3 position):
- Upper : Auto White Balance is ON. The white balance is adjusted according to the color temperature transition of the subject. This mode is suitable for shooting with variable lighting.
- Middle: 3200K (fixed) - for indoor shooting under incandescent light.
- Lower: 5600K (fixed) - for outdoor shooting on sunny days.

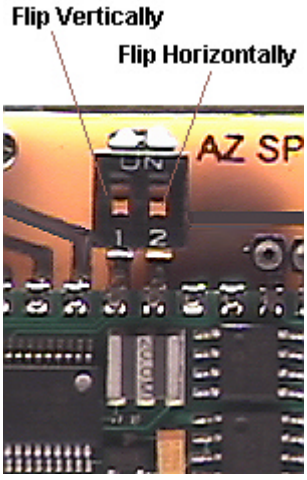
Gain control set by decimal switch:

"0" - Manual Gain (MG) 0dB
"1" - MG 2dB
"2" - MG 4dB
"3" - MG 6dB
"4" - MG 8dB
"5" - MG 10dB
"6" - MG 12dB
"7" - MG 14dB
"8" - AGC is ON
"9" - FR/A mode, 0dB

The flicker reduction switch is a 3 position switch:
- When set to the lower position, flickerfree mode FF is activated and the green LED is lit. This mode is designed to produce a flickerfree image for camera speeds ranging from 10 to 150 fps.
- When set to the middle position, flicker reduction is off and the green LED is not lit. The video assist is in normal mode.
- NTSC - When set to the upper position, flickerfree mode FF30 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 29.97 fps or 30 fps. In this mode, flickering is reduced by 70% for camera speeds other than 29.97 fps and 30 fps.
PAL - When set to the upper position, flickerfree mode FF24/25 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 24 fps or 25 fps.

If the video assist is powered from the camera's accessory connector, flickerfree modes FF , FF30 (NTSC) and FF24/25 (PAL) will only be active when the camera is running. Once the camera is stopped, normal mode will resume. If the digital gain control is set to "9", flickerfree FR/A mode will be active even when the camera is stopped. If the video assist is supplied from the 12 V battery using a cable with a 4 pin XLR connector, activation of the flickerfree FR/A mode will not depend on whether the camera is running.

The accessory connector which is installed on the side of the video assist is designed to supply power 12 V DC, 600mA to an LCD monitor.



DIP switches located on the electronics board: By using the DIP switches located on the electronics board you can flip the image horizontally (mirroring) or vertically (upside down).

Input /Output 12 pin HRS connector (pin configuration):

Pin 1 - OV, GND
Pin 2 - Input +24 V or +12 V
Pin 3 - Y- GND
Pin 4 - Y output of S-video
Pin 5 - NC
Pin 6 - Input: /ERUN, Fist
Pin 7 - NC
Pin 8 - C output of S-video
Pin 9 - C- GND
Pin 10 - NC
Pin 11 - input, if +12 V connected then FR/A mode is active
Pin 12 - NC

The flickerfree video assist can be easily mounted to Arriflex 16SR3, 16SR2, 16SR1, 35BL and 35III cameras.

14" supply cable 3Fischer-12HRS (for Arriflex SR3):

3 pin Fischer 12 pin HRS

Pin 1 ---------- Pin 1 (GND)
Pin 2 ---------- Pin 2 (+24 V)
Pin 3 ---------- Pin 6 (/ERUN)

28" supply cable 11Fischer-12HRS (for Arriflex 16SR, Arriflex 35III, Arriflex 35BL):

11 pin Fischer 12 pin HRS

Pin 9 ---------- Pin 1 (GND)
Pin 11 ---------- Pin 2 (+12 V)
Pin 6 ---------- Pin 6 (Fist)

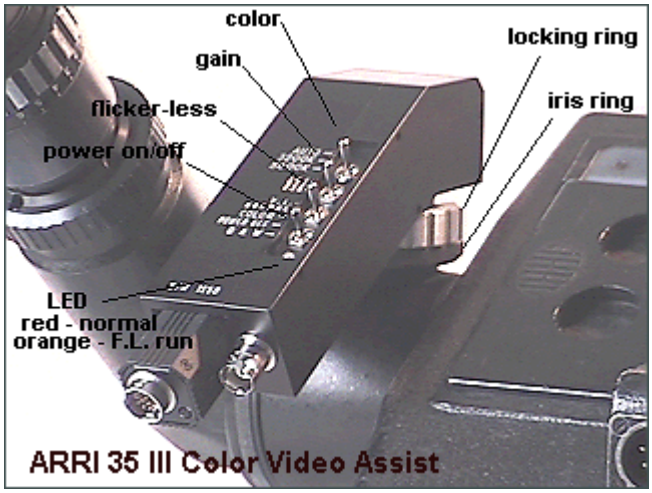
7' supply cable 4XLR-12HRS:

4 pin XLR 12 pin HRS

Pin 1 ---------- Pin 1 (GND)
Pin 4 ---------- Pin 2 and Pin 11 (+12 V)

Note:
- When the video assist is attached to the camera, the video assist's ground system GND (0V) is electrically connected to the camera body.

Flicker-less Color Video Assist Plus



We can make this video assist with a few different housings, depending on the specified mounting position on the camera.

Specifications:

- Signal system : NTSC, PAL standard or Y(luminance)/C(chrominance) selectable, RGB-optional
- Picture elements- NTSC: 768(H) x 494(V), PAL: 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal/external (switched automatically)
- Flicker reduction: PAL- 70% for 24fps, flicker free for 25fps; NTSC- 60% for 24fps, flicker free for 30fps
- Min. illumination: 2 Lux, F1.2 AGC:ON
- White balance: ATW(auto), 3200K and 5600K
- Digital Gain Control (pushbutton decimal switch) - 2 modes selectable: "0" AGC and "1..9" gain 0-20dB
- Video signal mode: Color or B&W
- Two color LED control: red - power on, green - flicker-less mode
- Digital Electronic Shutter Control (pushbutton decimal switch): “0”-1/60, “1”-1/125, “2”-1/250, “3”-1/500, “4”-1/1000, “5”-1/2000, “6”-1/4000, “7”-1/10000 s, “8”-1/60 flicker-less, “9”-1/125 flicker-less
- BNC video signal output connector: 1V p-p, 75ohm
- Power requirement: 12 V DC
- Power consumption: 3.2W (270mA)
- Body: Black anodize aluminum

Flickerfree Color Video Assist for Arriflex SR3

The specifications for the flickerfree video assist for the Arriflex 16SR3 are the same as those on page 4.

Integrated Flickerfree Color Video Assist for Arriflex 16SR and 16SR HS Reg 16 or Super 16 Format

This flickerfree CCD video assist is designed to produce a flickerfree image for camera speeds ranging from 10 to 150 fps. A Sony CCD image sensor provides it with high resolution, high sensitivity, and outstanding color fidelity. The power necessary to supply the unit is taken internally from the camera's 4 pin XLR power input receptacle. This integrated video assist system provides a picture on the monitor screen that is brighter and sharper than that of the T-bar or modified J-bar video tap because the CCD image sensor is installed closer to the fiber optic viewing screen. The viewfinder image is also brighter because the exposure meter's beamsplitter is removed and replaced by a brighter pellicle T70/R30 type beamsplitter. The video optics is independent of the viewfinder, so the video image is stable even when the viewfinder is rotating. This installation requires that the entire exposure meter section be removed from the camera body. This video assist is equipped with a noise filter which provides a clear monitor image even if the camera motor is noisy. The low power consumption, only 2.7W (220mA), gives your camera battery a longer life.

Specifications:

- Signal system: NTSC or PAL
- Picture elements: NTSC- 768(H) x 494(V), PAL-752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal
- Horizontal resolution: 470 TV lines
- Mode: Color or B&W
- Flicker reduction: 100% for speeds from 10fps to 150fps
- Min. illumination: 1.5 Lux, F1.2, AGC:ON
- White balance: AWB(auto), 3200K and 5600K
- Gain Control: 0dB, 4dB, AGC
- Video output (BNC connector): Composite 1.0 V p-p, 75 ohm
- Power requirement: 12 V DC (taken internally from the camera's battery)
- Power consumption: 2.7 W, 220mA/12V
- Operating temperature -5 to +113°F (-20 to +45°C)
- Body: Black extruded aluminum
- Size: 4.8" x 2.75" x 0.75" (122mm x 70mm x 19mm)

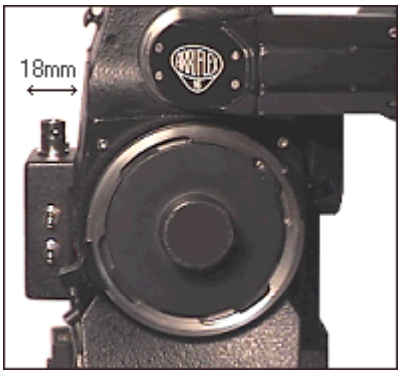
Power on/off switch (3 position):
- Lower: the video assist is ON in black and white mode (B&W) and the red LED is lit.
- Middle: power is OFF and the red LED is not lit.
- Upper: the video assist is ON in color mode and the red LED is lit.

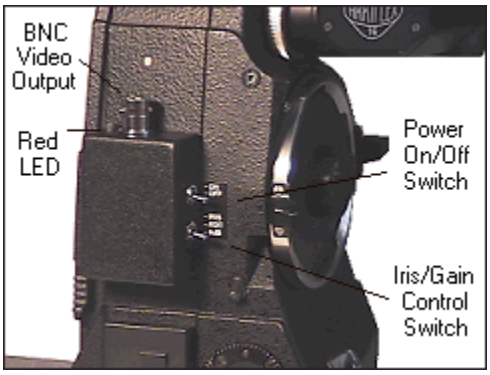
Gain control switch (3 position):
- Lower: gain control is set to 4dB.
- Middle: gain control is set to 0dB.
- Upper: auto gain control (AGC) is ON.

The flicker reduction switch (3 position):
- When set to the lower position, flickerfree mode FF is activated and the green LED is lit. This mode is designed to produce a flickerfree image for camera speeds above 10fps.
- When set to the middle position, flicker reduction is off and the green LED is not lit. The video assist is in normal mode.
- NTSC - When set to the upper position, flickerfree mode FF30 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 29.97 fps or 30 fps. In this mode, flickering is reduced by 70% for camera speeds other than 29.97 fps and 30 fps.
PAL - When set to the upper position, flickerfree mode FF24/25 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 24 fps or 25 fps.
Flickerfree modes FF , FF30 (NTSC) and FF24/25 (PAL) will only be active when the camera is running. Once the camera is stopped, normal mode will resume.

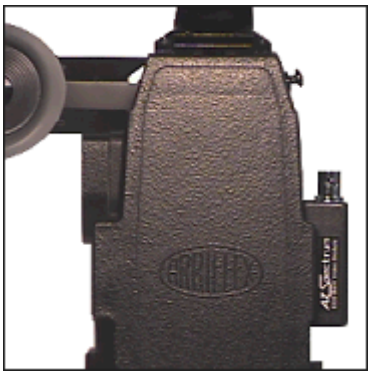
White balance switch (3 position):
- Lower: 5600K (fixed) - for outdoor shooting on sunny days.
- Middle: 3200K (fixed) - for indoor shooting under incandescent light.
- Upper: Auto White Balance is ON. The white balance is adjusted according to the color temperature transition of the subject. This mode is suitable for shooting with variable lighting.

Integrated B&W or Color Video Assist for Arriflex 16SR (Reg16 or Super16)





The CCD image sensor and video assist electronics are mounted inside the camera body. The control module with switches and output connector is mounted on the camera's side. The power necessary to supply the video assist is taken internally from the camera's 4 pin XLR power input receptacle. The internal image sensor installation provides a picture on the monitor screen that is brighter and sharper than that of the T-bar or modified J-bar video tap because the CCD image sensor is installed closer to the fiber optic viewing screen. The viewfinder image is also brighter because the exposure meter's beamsplitter is removed and replaced by a brighter pellicle T70/R30 type beamsplitter. The video optics is independent of the viewfinder, so the video image is stable even when the viewfinder is rotating. This installation requires that the entire exposure meter section be removed from the camera body. We can install this video assist in NTSC or PAL format.



Specifications for the B&W unit:

- SONY CCD image sensor
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)(EIA)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 420 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.3 Lux (F/1.4)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off
  - Lower: AGC control is OFF (0dB) and CCD IRIS control is OFF
  - Middle: AGC control (max 14dB) is ON and CCD IRIS control is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC control is OFF (0dB) and CCD IRIS control is ON; automatic exposure control of the CCD image sensor is activated. Use this setting when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12V DC (taken internally from the camera's battery)
- Power consumption: 1.4W (120mA)
- Operating temperature -5 to +113°F (-20 to +45°C)
- Size of the control module: 2.05" x 1.45" x 0.72" (52mm x 37mm x 18mm)
- Body: Black extruded aluminum

Specifications for the color unit:

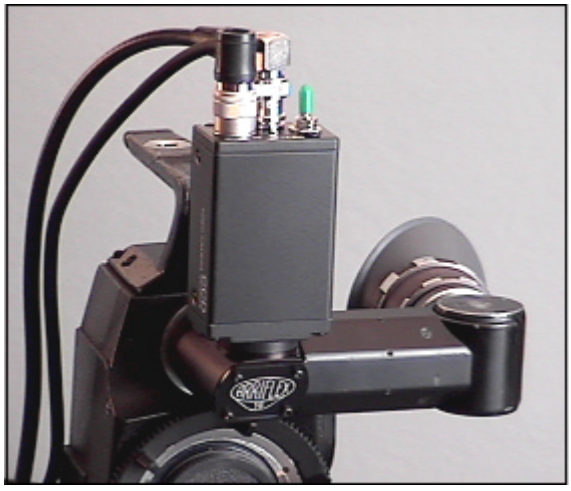
- SONY CCD image sensor
- Picture elements: NTSC 768(H) x 494(V), PAL 752(H) x 582(V)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 470 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.8 Lux, F1.2 AGC: ON
- Auto white balance (AWB)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off
  - Lower: AGC control is OFF (0dB) and CCD IRIS control is OFF
  - Middle: AGC control (max 14dB) is ON and CCD IRIS control is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC control is OFF (0dB) and CCD IRIS control is ON; automatic exposure control of the CCD image sensor is activated. Use this setting when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12V DC (taken internally from the camera's battery)
- Power consumption: 2.4W (200mA)
- Operating temperature -5 to +113°F (-20 to +45°C
- Size of the control module: 2.05" x 1.45" x 0.72" (52mm x 37mm x 18mm)
- Body: Black extruded aluminum

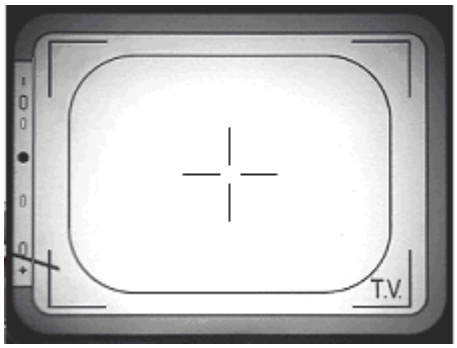
Arri 16 SR J-bar conversion

The conversion enables you to connect the video assist to the Arri 16SR J-bar type (rotating) viewfinder. This will allow the camera operator to look through the viewfinder and enables the director and others working on the production to view the finder image before and during shooting on a monitor screen.

Flicker-less B&W Video Tap

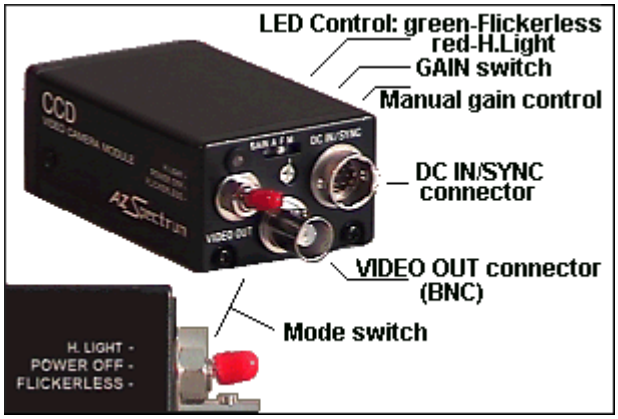
The Flicker-less CCD B&W Video Tap is an extremely compact device (modified Sony XC-ST50) which provides a high-resolution image with 768x494 pixels and flicker-less speed of a 24fps motion picture camera. This unit has a rear power ON/OFF switch with a LED indicator and panel gain control switch. It is small (only 1.75 x 1.15 x 3.6 inches), light (only 140g) and has a low power consumption just 1.5 W (125mA).





Specifications:

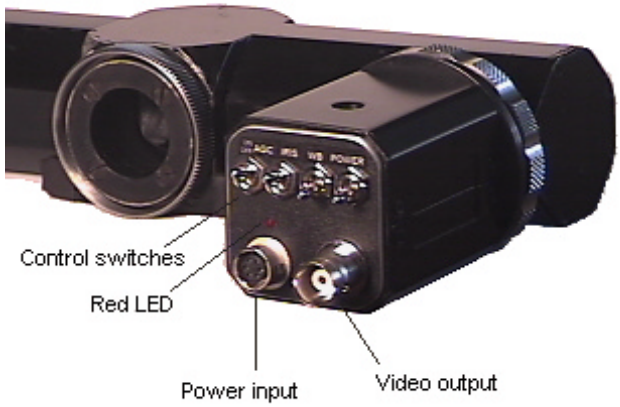
- Picture element: 768(H) x 494(V)
- Scanning system: 525 lines, 2:1 interlace
- Horizontal resolution: 470 TV lines
- Two modes: Flicker-less and High Light
- BNC video signal output connector
- Flicker reduction: 60% for 24fps, 100% for 30fps
- Sync system: Internal/external (switched automatically)
- Min. illumination: 0.3 Lux, F1.4 AGC mode
- Gain control: AGC/ Fixed gain 0dB/ Manual gain 0-20dB
- Power requirement: 11-15V DC
- Power consumption: 1.5W (125mA)
- Mount: C-mount or other
- Weight: 140g
- Size: 1.75” x 1.15” x 3.6” (44mm x 29mm x 92mm)



Color Video Assist for 16SR T-bar

Specifications:

- Signal system: NTSC or PAL
- Picture elements: NTSC- 768(H) x 494(V), PAL- 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal
- Horizontal resolution: 470 TV lines
- Min. illumination: 1 Lux, F1.2 AGC:ON
- White balance: AWB(auto)
- Gain Control: 0dB or AGC
- Video outputs: Composite 1 V p-p, 75 ohm
- Power consumption: 2.4 W, 200mA/12V
- Operating temperature -5 to +113°F (-20 to +45°C)
- Size 1.5" x 1.5" x 2.5" (38mm x 38mm x 64mm)



The following is a description of the two-position switches, from left to right in the picture above:

1. Auto gain control (AGC): upper position is ON, lower position is OFF (gain 0dB). Set this control to ON when the monitor image is underexposed (low light level).

2. CCD iris control: upper position is ON, lower position is OFF. Set this control to ON when the monitor image is overexposed.

3. White balance (WB). When set to the lower position, the white balance is in auto mode (AWB is on). When set to the upper position, the white balance is in constant color temperature mode (CCT). The CCT mode remembers the last color palette that was set in the lower position (last palette in AWB mode); the palette will remain constant even if the color temperature of the light source changes. To calibrate the white level for a particular color temperature, you will need to put a white sheet of paper in front of the camera lens and set the switch to the lower position for about 3 sec. Then turn it to the upper position to activate the CCT mode. The color palette will be set after this procedure .

4. Video assist power on/off switch: when in the upper position, the video power is ON and the red LED is lit; when in the lower position, the video power is OFF and the red LED is not lit.
The video output is a standard BNC composite video output.

Integrated Color Video Assist for Arri 16SR T-bar

This video assist modification is the best solution to cover the Super 16 image format for the ARRI 16SR T-bar.

Specifications:

- Image format: Regular 16 or Super 16
- Signal system : NTSC, PAL standard or Y(luminance)/C(chrominance), selectable, RGB-optional
- Picture elements- NTSC: 768(H) x 494(V), PAL: 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Horizontal resolution: 470 TV lines
- Sync system: Internal/external (switched automatically)
- Min. illumination: 3 Lux, F1.2 AGC:ON
- Video signal to noise ratio: more than 48 dB
- White balance: ATW(auto), 3200K, 5600K and manual
- Gain control: 2 modes selectable: AGC and fixed (0dB)
- Shutter speed: 1/60, 1/100-NTSC, 1/120-PAL 1/1000s and CCD IRIS (Auto)
- Power requirement: 12 V DC (can be taken from the camera's 11pin Fischer accessory connector)
- Power consumption: 2.4W (200mA)
- Body: Black anodize aluminum
- Cables: 2' Y-cable 11Fischer/BNC-12HRS or 7' Y-cable 4XLR/BNC-12HRS

6 DIP switches for setting functions

1 & 2 *WHITE BALANCE switches*
Select the white balance setting according to the lighting conditions.
- 3200K (fixed): for indoor shooting under incandescent light.
- 5600K (fixed): for outdoor shooting on sunny days.
- ATW (auto tracing white balance): the white balance is adjusted according to the color temperature transition of the subject. This mode is suitable for shooting with variable lighting.
- MAN (manual): Select this position when you want to adjust the red color with the R control and the blue color with the B control.

3 & 4 *SHUTTER speed switches*.
Set the SHUTTER speed switches to select the desired shutter speed.
- 1/60 s (NTSC), 1/50 s (PAL)
- 1/1000 s
- 1/100 s (NTSC), 1/120 (PAL)
- CCD IRIS: the video assist automatically adjusts the shutter speed according to amount of incident light, thus regulating the level of the video signal.

5 *AGC (auto gain control) ON/OFF switch.*
- ON: Auto gain control
- OFF: 0 dB

6 *Y/C / VBS switch* (to use this option you need a special cable).
- V/C: Select this position to output the Y/C separated signal.
- VBS: Select this position to output the VBS composite signal.

- ***R control*** *for manual white balance adjustment*.
This control is effective when the WHITE BALANCE switches are set to MAN. Adjust the red color by turning the control.
- ***B control*** *for manual white balance adjustment*.
This control is effective when the WHITE BALANCE switches are set to MAN. Adjust the blue color by turning the control.

Video Assist for the Arriflex 16BL

For the Arriflex 16BL, we have both a B&W and a color CCD video assist. It is installed inside the camera door and allows you to look through the viewfinder and display the picture from the video assist on a monitor at the same time. For the APEX door with exposure meter, we will remove the meter section from the door before the video assist installation. This unit has an on/off power switch, AGC/CCD auto iris switch and a BNC video output connector. For the installation, you have to send us just the camera door. It is easy to remove the door from the body. You have to open the door, remove the 4 screws, and slide the door off from the hinge.

Specifications for the color unit:

- SONY CCD image sensor
- Picture elements: NTSC 768(H) x 494(V), PAL 752(H) x 582(V)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 470 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.8 Lux, F1.2 AGC: ON
- Auto white balance (AWB)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off
  - Lower: AGC control is OFF (0dB) and CCD IRIS control is OFF.
  - Middle: AGC control (max 14dB) is ON and CCD IRIS control is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC control is OFF (0dB) and CCD IRIS control is ON; automatic exposure control of the CCD image sensor is activated. Use this setting when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit
- Power requirement: 12V DC
- Power consumption: 2.4W (200mA)
- Operating temperature -5 to +113°F (-20 to +45°C)

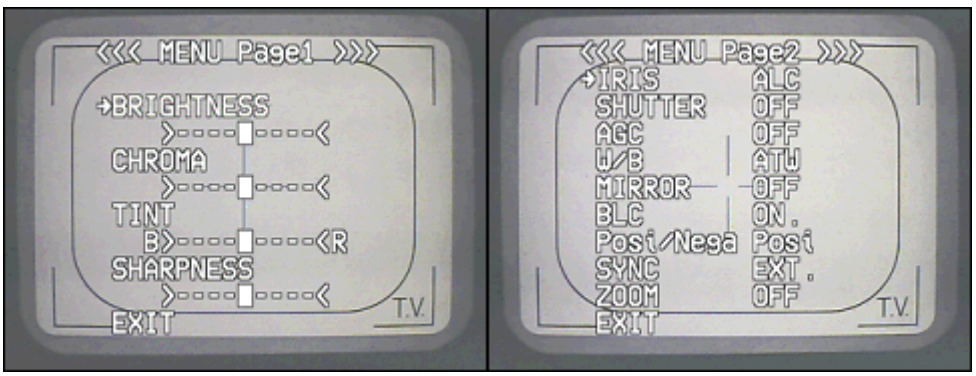
Specifications for the B&W unit:

- SONY CCD image sensor
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)(EIA)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 420 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.3 Lux (F/1.4)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off
  - Lower: AGC control is OFF (0dB) and CCD IRIS control is OFF.
  - Middle: AGC control (max 14dB) is ON and CCD IRIS control is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC control is OFF (0dB) and CCD IRIS control is ON; automatic exposure control of the CCD image sensor is activated. Use this setting when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit
- Power requirement: 12V DC
- Power consumption: 1.4W (120mA)
- Operating temperature -5 to +113°F (-20 to +45°C)

Specifications for the color unit with on screen display (OSD) control (APEX door only):

- CCD sensor - SONY 1/3" interline transfer
- Picture elements: 811 (H) x 508 (V) NTSC
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Horizontal resolution: 480 TV lines
- Video output: 1.0 V p-p composite video 75 ohm
- BNC video output connector
- Min. illumination: 0.8 Lux (F=1.2)
- Brightness, Chroma, Tint, Sharpness by OSD Control
- White balance Auto/Fix (3200-10000K)
- Gain control: AGC on/off
- Iris control: CCD Iris on/off
- Electronic shutter 1/60-1/120,000s
- BLC function on/off
- Digital Zoom on/off
- Gamma correction: 0.45
- Power requirement: 12 V DC
- Power consumption: 1.8 W (150mA)
- Power ON/OFF switch
- LED power indicator

Color Video Assist for APEX Door



Video Assist for Arriflex 35 IIC Camera

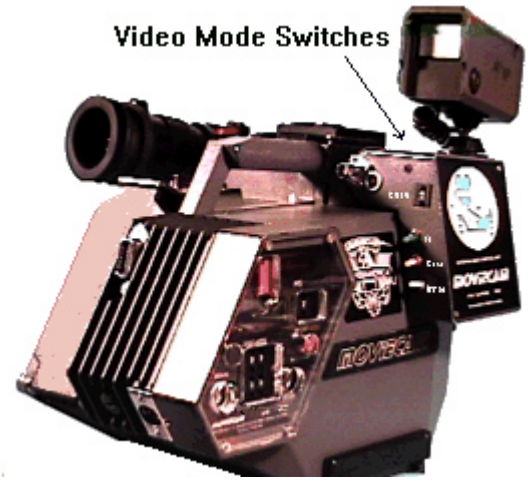
For the Arriflex 35 IIC we have a color video assist system which replaces the viewfinder section . This design has the best image quality and is ideal for steadicam operation. With this design, the viewfinder can be quickly reinstalled whenever the video assist is not needed.

Specifications :

- Signal system : NTSC, PAL standard
- Picture elements- NTSC: 756(H) x 485(V), PAL: 739(H) x 575(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal/external (switched automatically)
- Horizontal resolution: 470 TV lines
- Min. illumination: 3 Lux, F1.2 AGC:ON
- Video signal to noise ratio: more than 48 dB
- White balance: ATW(auto), 3200K, 5600K and manual
- Gain control: AGC and fixed (0dB)
- Shutter speed: 1/60, 1/100-NTSC, 1/120-PAL 1/1000s and CCD IRIS (Auto)
- Power requirement: 12 V DC
- Power consumption: 2.4 W (200mA)
- Body: Black anodize aluminum
- Cables: 2' Y-cable 11Fischer/BNC-12HRS or 7' Y-cable 4XLR/BNC-12HRS

Flickerfree Color Video Assist for Moviecam Super 35mm

The conversion to a flickerfree color video assist is designed to produce a flickerfree monitor image for camera speeds above 10 fps.



Specifications :

- Signal system : NTSC or PAL standard
- Picture elements- NTSC: 768(H) x 494(V), PAL: 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal
- Horizontal resolution: 470 TV lines
- Mode: Color or B&W
- Flicker reduction: 100% for speeds above 10 fps
- Min. illumination: 1 Lux, F1.2 AGC:ON
- White balance: ATW(auto), 3200K, 5600K
- Digital gain control set by decimal pushbutton switch
- Video output: BNC connector, composite signal 1Vp-p, 75 ohm
- Power requirement: 24 V DC (from the camera's battery)
- Power consumption: 3.1W (130mA)

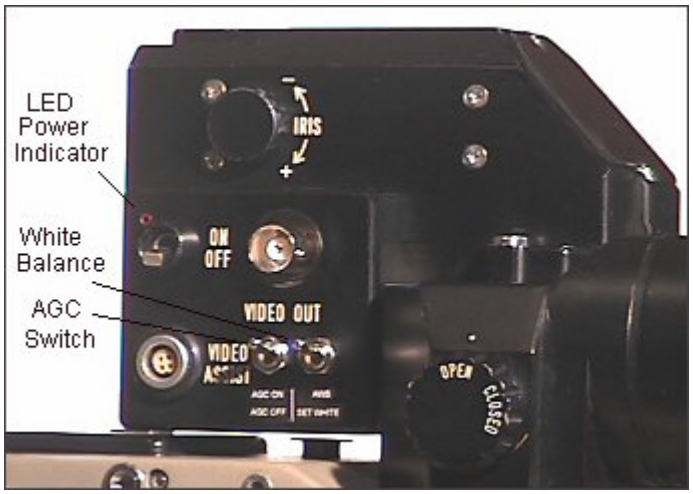
Note: All switches are mounted onto the old external video control unit. The switches function in the same way as those on the flickerfree color video assist for the Aaton XTR (see page 19).

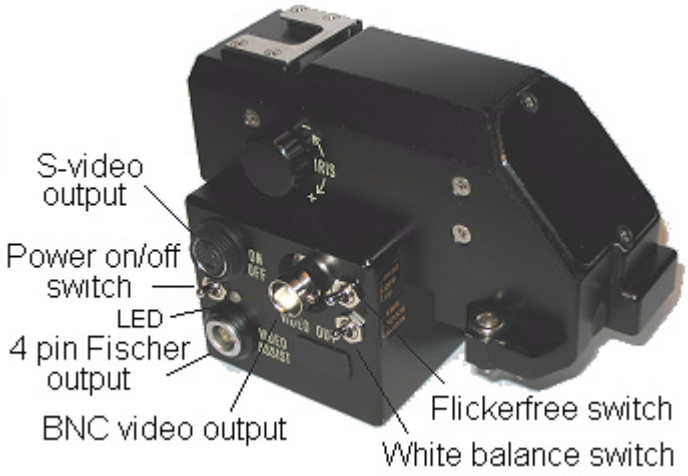
Moviecam SL B&W Video Assist (Videofinder) Conversion to Color Reg or Flickerfree

The old B&W video assist electronics is replaced by a new set which provides the color video image in PAL or NTSC video formats. We are offering conversion to a regular or flickerfree color video assist.

Specifications for the regular color unit:

- Signal system: NTSC or PAL
- Picture elements: NTSC- 768(H) x 494(V), PAL- 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Sync system: Internal
- Horizontal resolution: 470 TV lines
- Min. illumination: 1 Lux, F1.2 AGC:ON
- White balance: AWB(auto)
- Gain Control: 0dB or AGC
- Video outputs: Composite 1 V p-p, 75 ohm
- Power consumption: 2.4 W, 200mA/12V
- Operating temperature -5 to +113°F (-20 to +45°C)

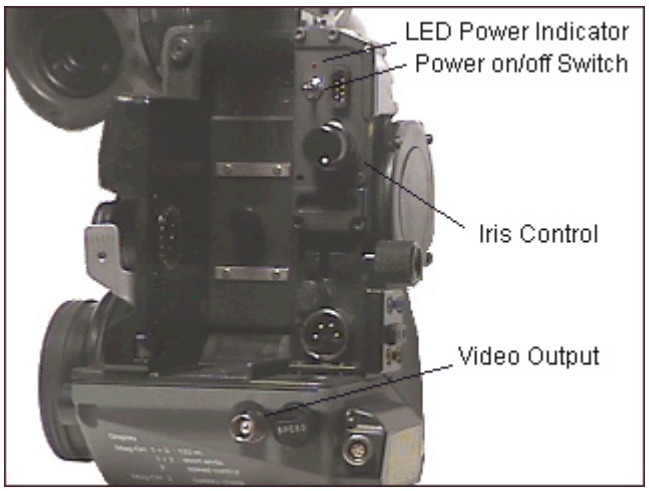




Specifications for the flickerfree color unit are the same as those for the Moviecam Super 35mm unit.

Video Assist for Aaton XTR (Reg16 or Super16)

The CCD image sensor and video assist electronics are mounted inside the camera body. The power necessary to supply the video assist is taken internally from the camera's 4 pin XLR power input receptacle. You can use an on-board battery in a regular way without an adapter.



Specifications B&W:

- SONY CCD image sensor
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)(EIA)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 420 TV lines
- Min. illumination: 0.3 Lux (F/1.4)
- CCD IRIS control knob
- LED power indicator
- Power requirement: 12V DC (from the camera's battery)
- BNC video output connector: 1.0 V p-p composite video at 75 ohm
- Power on/off switch - 3 position switch which controls the video power on/off and AGC on/off

- Lower: Power is ON, AGC is OFF, and the red LED is lit
- Middle: Power is OFF and the red LED is not lit
- Upper: Power is ON, AGC is ON, and the red LED is lit. Use this setting when the monitor image is underexposed (low light level).

- Power consumption: 1.4W (120mA/12V)
- Operating temperature -5 to +113°F (-20 to +45°C)

Specifications for the color unit:

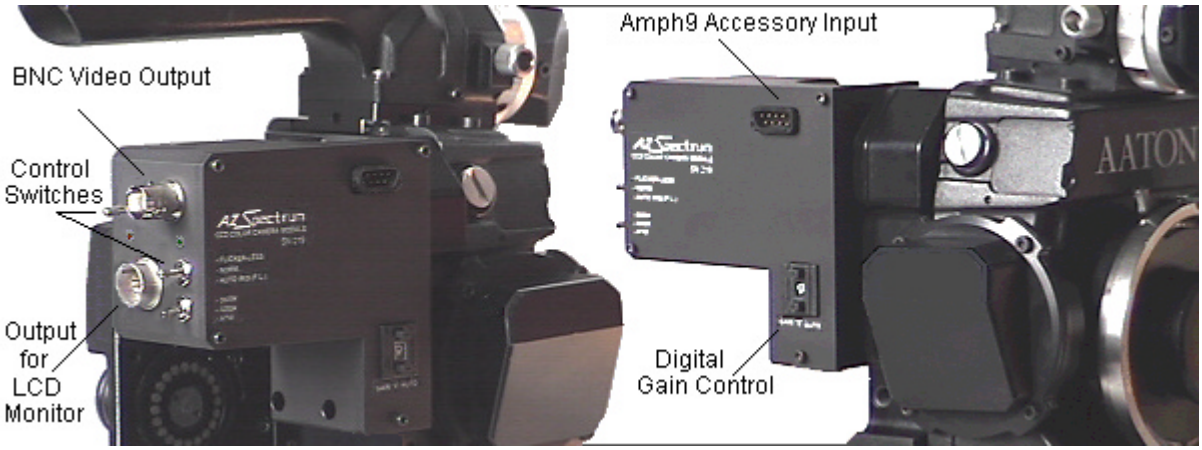
- SONY CCD image sensor
- Signal system: NTSC or PAL
- Picture elements: NTSC 768(H) x 494(V), PAL 752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
- Horizontal resolution: 470 TV lines
- Min. illumination: 0.8 Lux, F1.2 AGC: ON
- BNC video output connector: 1.0 V p-p composite video at 75 ohm
- White balance: AWB (auto white balance)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off
  - Lower: AGC control is OFF (0dB) and CCD IRIS control is OFF.
  - Middle: AGC control (max 14dB) is ON and CCD IRIS control is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC control is OFF (0dB) and CCD IRIS control is ON. Use this setting when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12V DC (from the camera's battery)
- Power consumption: 2.4 W (200mA/12V)
- Operating temperature -5 to +113°F (-20 to +45°C)

Notes:

- When the video assist is attached to the camera, the video assist's ground system GND (0V) is electrically connected to the camera body.

Flickerfree Color Video Assist for Aaton XTR

This video assist is designed to produce a flickerfree image for the Aaton XTR camera. A Sony CCD image sensor provides this unit with high resolution, high sensitivity, and outstanding color fidelity. The power necessary to supply the video assist is taken internally from the camera's 4 pin XLR power input receptacle. This video assist is equipped with a noise filter which provides a clear monitor image even if the camera motor is noisy. The low power consumption, only 2.7W (225mA), gives your camera battery a longer life.



Specifications:

- Signal system: NTSC or PAL
- Picture elements: NTSC- 768(H) x 494(V), PAL-752(H) x 582(V)
- Scanning system: NTSC - 525 lines, PAL - 625 lines 525 lines, 2:1 interlace
- Sync system: Internal
- Horizontal resolution: 470 TV lines
- Mode: Color or B&W
- Flicker reduction: 100%
- Min. illumination: 1 Lux, F1.2 AGC:ON
- White balance: AWB (auto), 3200K and 5600K
- Gain control: 0-14dB and AGC on/off set by decimal pushbutton switch
- Video output (BNC connector): composite 1.0 V p-p, 75 ohm
- Accessory connector: supplies video signal and power 12V DC, 700mA to LCD monitor.
- Power requirement: 12 V DC (taken internally from the camera's battery)
- Power consumption: 2.7 W, 220mA/12V
- Operating temperature -5 to +113°F (-20 to +45°C)
- Body: Black anodized aluminum

Power on/off switch (3 position):
- Lower: the video assist is ON in black and white mode (B&W) and the red LED is lit.
- Middle: power is OFF and the red LED is not lit.
- Upper: the video assist is ON in color mode and the red LED is lit.

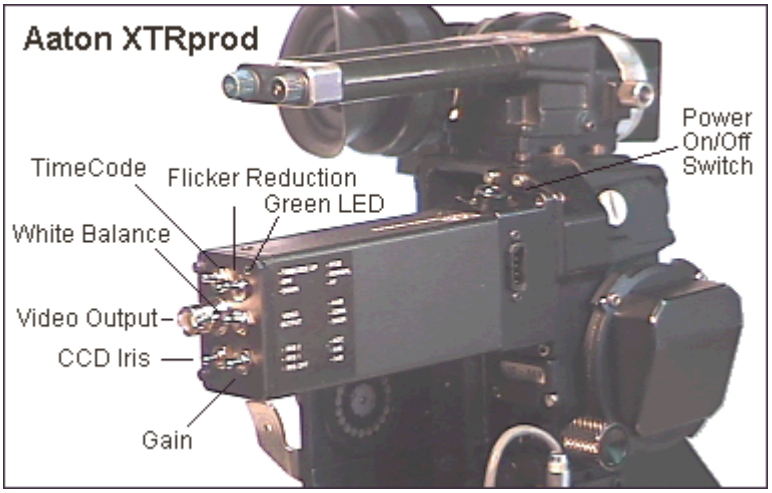
The flicker reduction switch (3 position):
- When set to the lower position, flickerfree mode FF is activated and the green LED is lit. This mode is designed to produce a flickerfree image for camera speeds above 10fps.
- When set to the middle position, flicker reduction is off and the green LED is not lit. The video assist is in normal mode.
- NTSC - When set to the upper position, flickerfree mode FF30 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 29.97 fps or 30 fps. In this mode, flickering is reduced by 70% for camera speeds other than 29.97 fps and 30 fps.
PAL - When set to the upper position, flickerfree mode FF24/25 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 24 fps or 25 fps.
Flickerfree modes FF , FF30 (NTSC) and FF24/25 (PAL) will only be active when the camera is running. Once the camera is stopped, normal mode will resume.

Gain control set by decimal switch:
"0" - Auto Gain Control (AGC) is OFF, CCD Iris is ON
"1" - Manual Gain (MG) 0dB
"2" - MG 2dB
"3" - MG 4dB
"4" - MG 6dB
"5" - MG 8dB
"6" - MG 10dB
"7" - MG 12dB
"8" - AGC is ON
"9" - MG 14dB

White balance switch (3 position):
- Lower: 5600K (fixed) - for outdoor shooting on sunny days.
- Middle: 3200K (fixed) - for indoor shooting under incandescent light.
- Upper: Auto White Balance is ON. The white balance is adjusted according to the color temperature transition of the subject. This mode is suitable for shooting with variable lighting.

Aaton XTRprod B&W Video Assist Conversion to Color Flickerfree

The old XC-77 B&W video assist electronics is replaced by a new set which provides the color flickerfree video image in NTSC or PAL video formats. The conversion to a flickerfree color video assist is designed to produce a flickerfree monitor image for camera speeds above 10 fps. We offer two versions of the conversion: version 1 - timecode can be displayed on the monitor screen and version 2- without timecode.



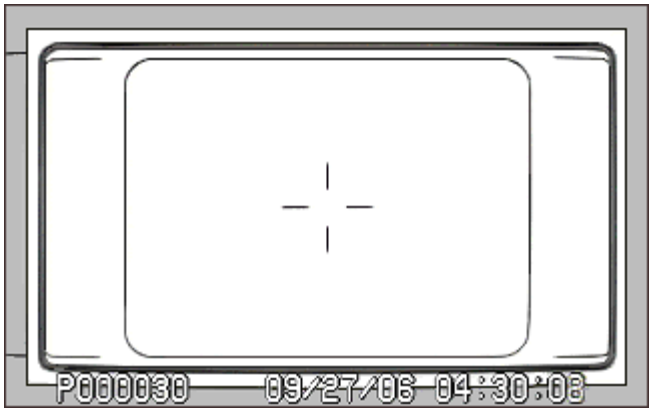
Specifications:
Signal system : NTSC or PAL standard
Sony 1/2" HYPER HAD CCD image sensor
Picture elements- NTSC: 768(H) x 494(V), PAL: 752(H) x 582(V)
Scanning system: NTSC - 525 lines, PAL - 625 lines, 2:1 interlace
Sync system: Internal
Horizontal resolution: 470 TV lines
Flicker reduction: 100%.
Min. illumination: 1lux, F1.2 AGC:ON
White balance: ATW(auto), 3200K, 5600K
Gain control: 0dB, 4dB and AGC
Timecode can be displayed on a monitor screen (version 1)
Video output (BNC connector): composite 1V p-p, 75ohm
Power requirement: 12V from the camera's battery
Power consumption: version 1- 3.8W (320mA), version 2 - 2.7W (220mA)
Operating temperature -5 to +113°F (-20 to +45°C)
Body: Original XC-77 housing with modified rear switch section

The flicker reduction switch (3 position):
- When set to the lower position, flickerfree mode FF is activated and the green LED is lit. This mode is designed to produce a flickerfree image for camera speeds above 10fps.
- When set to the middle position, flicker reduction is off and the green LED is not lit. The video assist is in normal mode. If the iris switch is set to the IRIS 2 position and the gain switch is set to AGC, the normal mode offers automatic exposure control under a wide range of shooting conditions.
- NTSC - When set to the upper position, flickerfree mode FF30 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 29.97 fps or 30 fps. In this mode, flickering is reduced by 70% for camera speeds other than 29.97 fps and 30 fps.
PAL - When set to the upper position, flickerfree mode FF24/25 is activated and the green LED is lit. This mode provides a 100% flickerfree image when operating at a camera speed of 24 fps or 25 fps.
Flickerfree modes FF , FF30 (NTSC) and FF24/25 (PAL) will only be active when the camera is running. Once the camera is stopped, normal mode will resume.

TimeCode switch (3 position):

- Lower: timecode is displayed at the bottom of the monitor screen.
- Middle: timecode is not displayed on the monitor screen.
- Upper: timecode is displayed at the top of the monitor screen.

In order to display timecode, the timecode has to be initialized in the Aaton camera (e.g. by Origin C). The timecode is displayed on the monitor screen in the following format: P followed by a 6 digit production number, date: month/day/year (or day/month/year in the PAL version), time: hours:minutes:seconds. If the camera is running, the letter R will be displayed after the production number.



White balance switch (3 position):

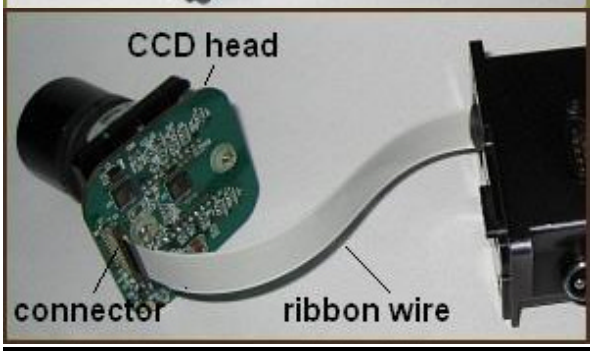
- Lower: 5600K (fixed) - for outdoor shooting on sunny days.
- Middle: 3200K (fixed) - for indoor shooting under incandescent light.
- Upper: Auto White Balance is ON. The white balance is adjusted according to the color temperature transition of the subject. This mode is suitable for shooting with variable lighting.

Gain control switch (3 position):

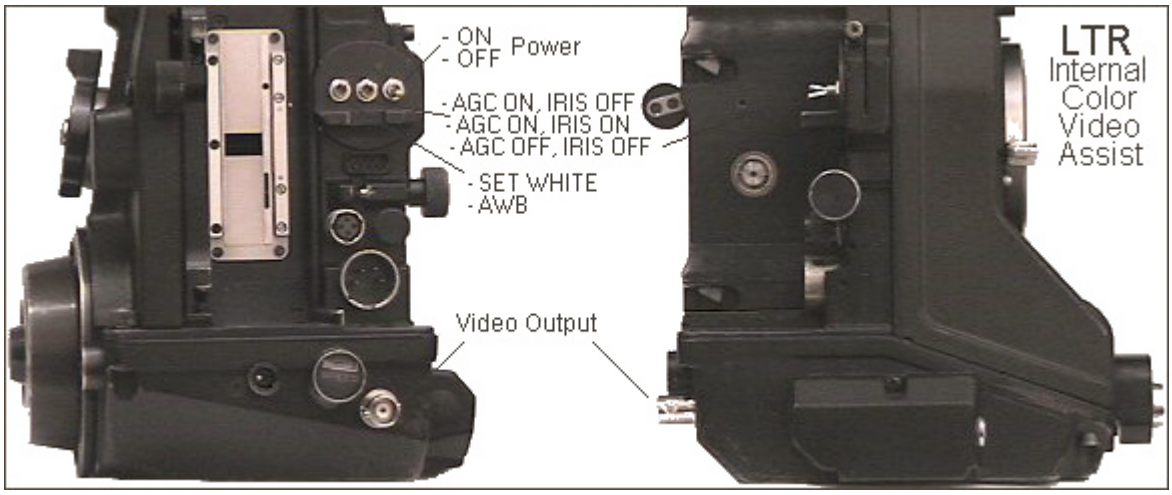
- Lower: gain control is set to 0dB.
- Middle: gain control is set to 4dB.
- Upper: auto gain control (AGC) is ON.

CCD iris switch (3 position):

- Lower: CCD IRIS is OFF. Use this setting under low light conditions.
- Middle: CCD IRIS 1 is ON. Use this setting under moderate light conditions.
- Upper: CCD IRIS 2 is ON. Use this setting under intense light conditions (outdoors on a sunny day).



B&W or Color Internal Video Assist for Aaton LTR (Reg16 or Super16)



The CCD image sensor and video assist electronics are mounted inside the camera body. The power necessary to supply the video assist is taken internally from the camera's 4 pin XLR power input receptacle. You can use an on-board battery in a regular way without an adapter. Our internal installation will give you a picture that is brighter than that of the external one because the CCD image sensor is installed closer to the beamsplitter.

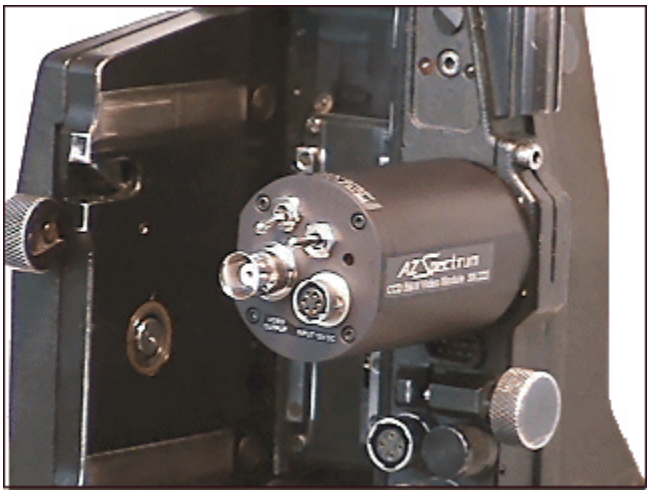
Specifications for the color unit:

- SONY CCD image sensor
- Signal system: NTSC or PAL
- Picture elements: NTSC 768(H) x 494(V), PAL 752(H) x 582(V)
- Scanning system: 525 lines, PAL - 625 lines, 2:1 interlace
- Horizontal resolution: 470 TV lines
- Min. illumination: 0.8 Lux, F1.2 AGC: ON
- BNC video output connector: 1.0 V p-p composite video at 75 ohm
- White balance: AWB (auto white balance)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off:
  - Lower: auto gain control AGC and CCD iris are OFF. Use this setting under moderate light conditions.
  - Middle: AGC (max 16dB) and CCD IRIS are ON ; automatic exposure control of the CCD image sensor is activated. Use this setting under low light conditions.
  - Upper: AGC is OFF and CCD IRIS is ON. Use this setting under intense light conditions (outdoors on a sunny day).
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12 to 17 V DC (from the camera's battery). Power consumption: 1.8 W (150mA/12V)

Specifications for the B&W unit:

- SONY CCD image sensor
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)(EIA)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 420 TV lines
- Min. illumination: 0.3 Lux (F/1.4)
- BNC video output connector: 1.0 V p-p composite video at 75 ohm
- Auto Gain Control (AGC) on/off switch: upper position AGC is ON, lower position is OFF (0dB). Set this control to ON when the monitor image is underexposed (low light level).
- CCD IRIS control on/off switch: upper position CCD IRIS control is ON, lower position is OFF. Set this control to ON when the monitor image is overexposed.
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12 - 17V DC (from the camera's battery). Power consumption: 1.4W (120mA/12V)

B&W or Color External Video Assist for Aaton LTR



This compact unit replaces the old tube video tap. Its length is 2.5" and it needs only 120mA of current to run.

Specifications for the B&W unit:

- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)
- Scanning system: 2:1 Interlace
- Video output: 1.0 V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.3 Lux (F/1.4)
- AGC/CCD IRIS control switch
- Power requirement: 12 to 17 V DC
- Power consumption: 1.4 W (120mA)
- Power ON/OFF switch
- LED power indicator
- Body : black anodized aluminum

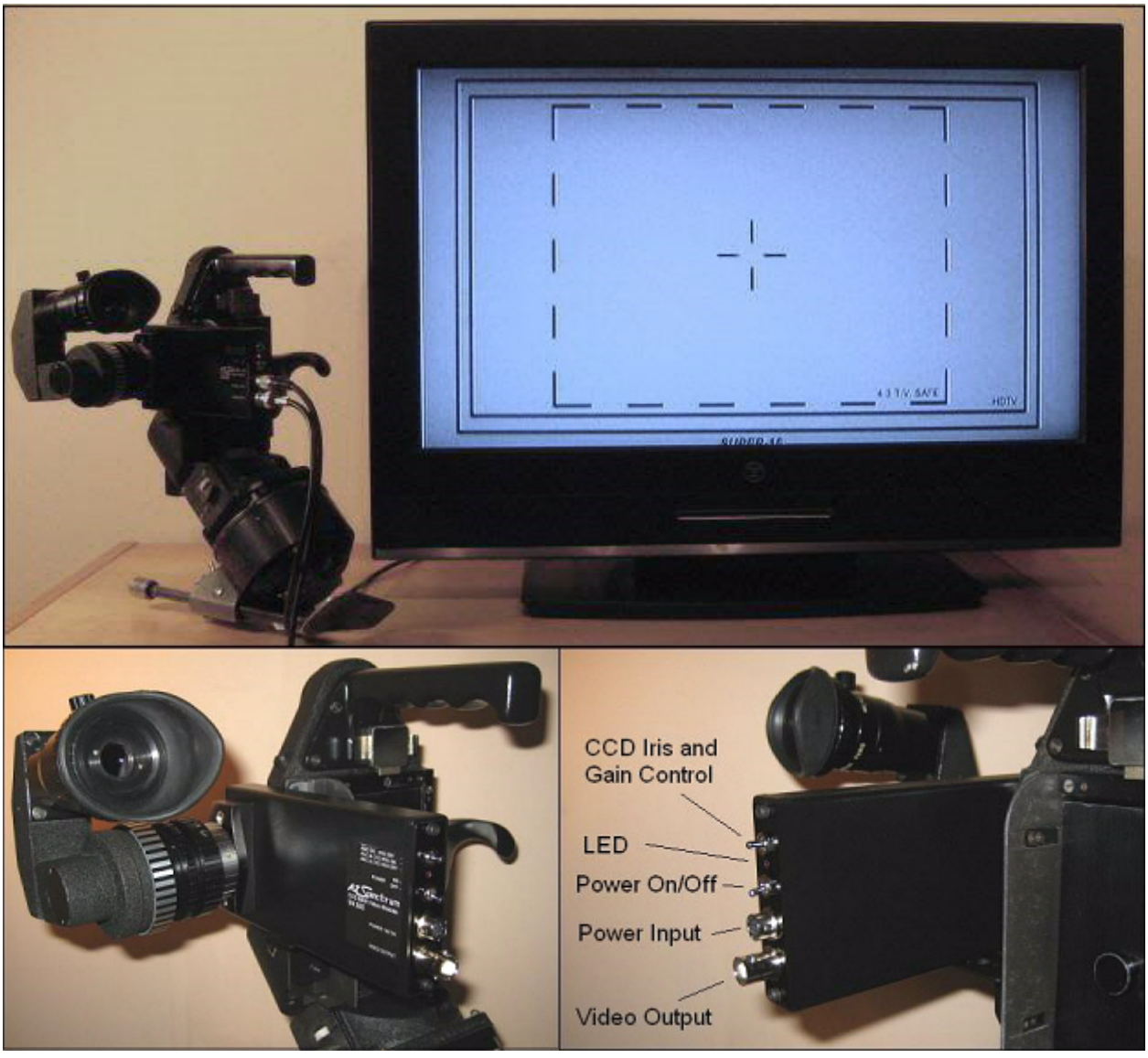
Specifications for the color unit:

- Picture elements: 510 (H) x 492 (V) NTSC
- Scanning system: 2:1 Interlace
- Video output: 1.0 V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 1 Lux (F=2.0)
- Auto white balance
- AGC/CCD IRIS control switch
- Power requirement: 12 to 17 V DC
- Power consumption: 2.4 W (200mA)
- Power ON/OFF switch
- LED power indicator
- Body: black anodized aluminum

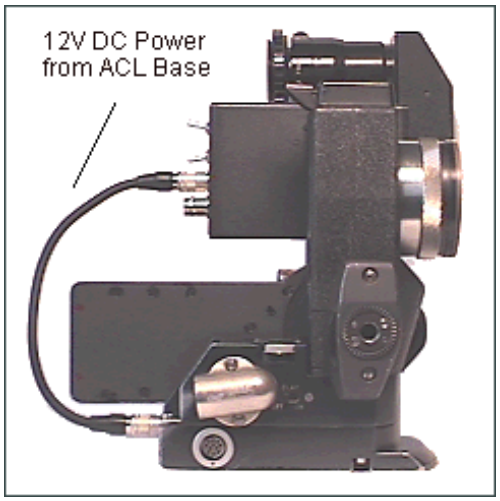
Video Assist for Eclair NPR and ACL (Reg16 or Super16)

Our B&W or color CCD video assist module for the Eclair NPR and ACL is mounted between the camera body and the viewfinder. It allows you to look through the viewfinder and display the picture from the video assist on a monitor at the same time. This unit has an on/off power switch, red LED power indicator, AGC (auto gain control)/CCD iris switch and a BNC video output connector. It does not require a specific type of viewfinder.

Eclair NPR:



Eclair ACL: The video module can be powered from the camera battery by using a Y adapter cable or from the ACL base. We can install 2 connectors onto the ACL base. The first one will supply 12 V to the video assist (120mA). The second one will supply 12 V to the LCD monitor (600mA-800mA) and will carry the video signal from the video assist. The 12 V power needed to supply these devices will be taken internally from the camera's power input connector.



Specifications for the B&W unit for Eclair NPR and ACL:

- SONY CCD image sensor
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)(EIA)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 420 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 0.3 Lux (F/1.4)
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off:
  - Lower: AGC and CCD IRIS are OFF.
  - Middle: AGC (max 16dB) is ON and CCD IRIS is OFF. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC is OFF and CCD IRIS is ON; automatic exposure control of the CCD image sensor is activated. Use this setting when the monitor image is overexposed (intense light conditions, outdoors on a sunny day).
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- Power requirement: 12V DC (+/- 1V)
- Power consumption: 1.4W (120mA)
- Operating temperature -5 to +113°F (-20 to +45°C)
- Body: Black extruded aluminum

Specifications for the color unit for Eclair NPR and ACL:

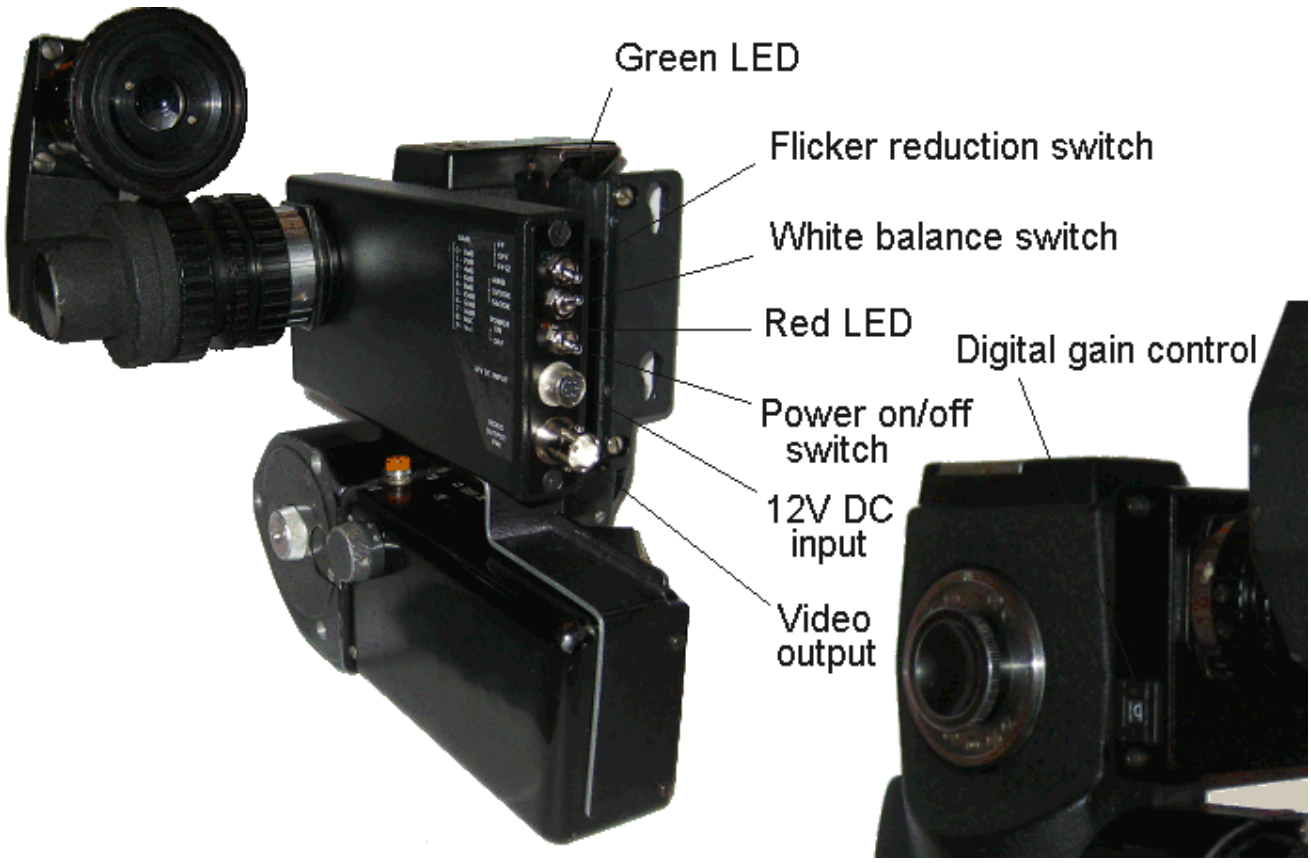
- SONY CCD image sensor
- Signal system: NTSC or PAL
- Picture elements: NTSC 768(H) x 494(V), PAL 752(H) x 582(V)
- Scanning system: 2:1 Interlace
- Horizontal resolution: 470 TV lines
- Video output: 1.0V p-p composite video at 75 ohm
- BNC video output connector
- Min. illumination: 1.5 Lux (F/1.4)
- LED power indicator
- Power on/off switch: when in upper position, the video power is ON and the red LED is lit; when in lower position, the video power is OFF and the red LED is not lit.
- AGC/CCD IRIS control switch: 3 position switch which controls the CCD IRIS and AGC on/off:
  - Lower: auto gain control AGC and CCD IRIS are OFF. Use this setting under moderate light conditions.
  - Middle: AGC (max 16dB) and CCD IRIS are ON. Use this setting when the monitor image is underexposed (low light level).
  - Upper: AGC is OFF and CCD IRIS is ON. Use this setting when the monitor image is overexposed (intense light conditions, outdoors on a sunny day).
- Power requirement: 12V DC (+/- 1V)
- Power consumption: 1.8W (150mA)
- Operating temperature -5 to +113°F (-20 to +45°C)
- Body: Black extruded aluminum

NPR/ACL Video Assist Supply Cable:

	4 pin XLR	6 pin HRS
Batt. Negative (-)	pin1 ----------	pin3
Batt. Positive (+)	pin4 ----------	pin6

PAL Color Flickerfree Unit

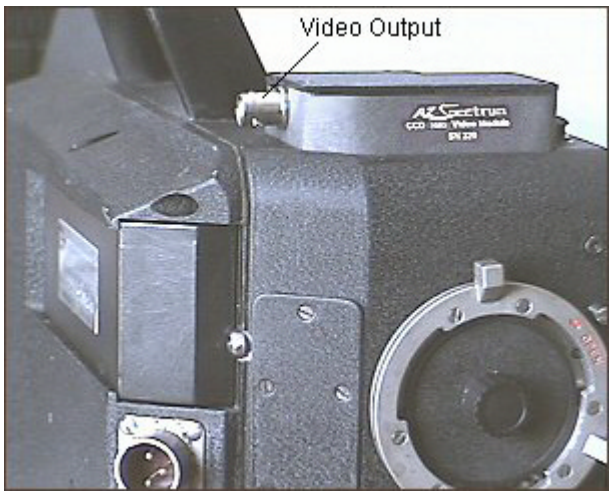
Specifications for the flickerfree NPR/ACL color unit are the same as those for the Arriflex 16SR flickerfree unit (see page 8).



Video Assist for the Cinema Products GSMO Camera

Specifications for the video assist systems for the Cinema Products cameras are the same as those for the Eclair NPR/ACL video assist.

Integrated Video Assist for the Cinema Products 16R Camera



Specifications for the B&W unit:

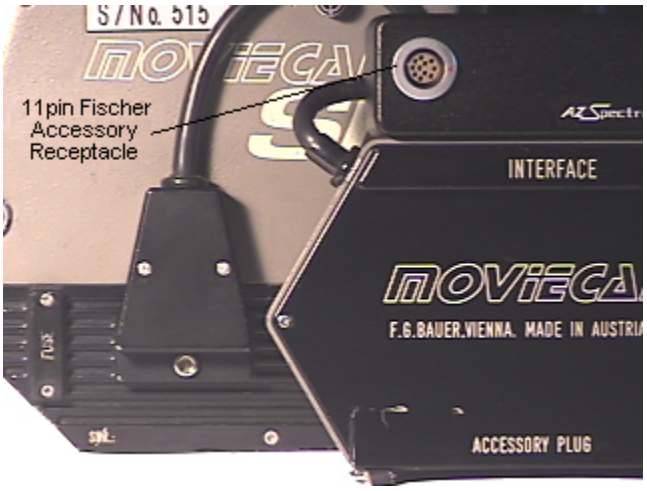
- Signal system: EIA or CCIR
- Picture elements: 512(H) x 492(V)
- Scanning system: 2:1 Interlace
- BNC video output connector: 1.0 V p-p composite video at 75 ohm
- Min. illumination: 0.3 Lux (F/1.4)
- AGC/CCD IRIS control switch
- Power requirement: 12 to 17 V DC (taken internally from the camera's battery)
- Power consumption: 1.4 W (120mA)
- Power ON/OFF switch
- LED power indicator

ARRI Standard 11 pin Fischer Receptacle for Moviecam Super 35 Camera

With this modification the Moviecam Super 35mm camera becomes ARRI compatible. It allows the camera operator to control the speed of the camera, use the Film/Video Synchronizing Control and also digitally read out the speed and footage by the ARRI compatible accessories. Output voltage : 12 V DC, max. current: 1A.

11 pin Fischer receptacle

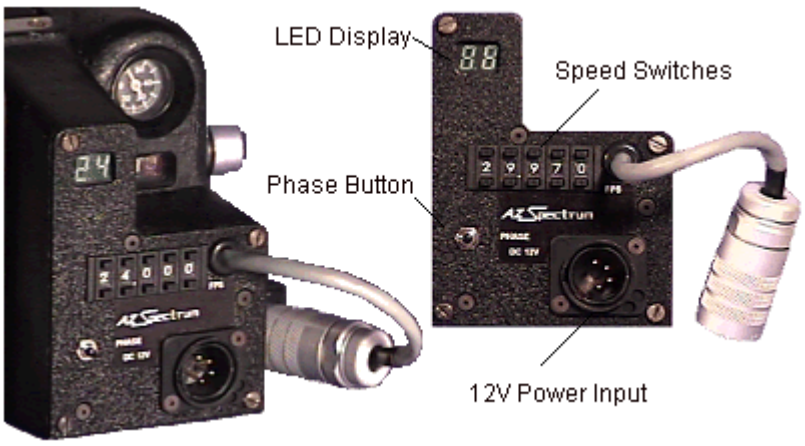
11 pin Fischer - ARRI Standard Receptacle for Moviecam SL Interface



With this modification, the Moviecam SL Interface becomes ARRI compatible. It allows the camera operator to: control the speed of the Moviecam SL camera by using an ARRI compatible precision speed control. Output voltage: 12 V DC, max. current: 1A.

Precision Speed Control for Arriflex 16BL Camera

AZ Spectrum's Precision Speed Control for the Arriflex 16BL provides speeds from 3.000 fps to 50.000 fps in 0.001 fps increments and has: a green digital LED speed display, phase control, battery condition monitor on LED display, and a 12 V power input 4 XLR receptacle. Pushbutton switches easily accomplish speed changes. The phase shift button can be used to synchronize the film to a flickering image. It is ideal for eliminating the scan line while filming video or computer monitors and synchronizing the camera to a film projector or HMI lights. This unit replaces the old slating system in the rear of the 16BL camera.



Second 11 pin Fischer Receptacle for ARRIFLEX 16SR

This modification enables the connection of two camera accessories at the same time. Output voltage: 12 V DC, max. current: 3A.

Crystal Speed Control for Perfectone Constant-Speed Motor (Eclair NPR)

Specifications:

- Crystal speed 24 fps, variable speed 8 - 40 fps
- Sync warning LED
- The unit is equipped with a shutter-parking circuit (stopping the mirror shutter in the viewing position)
- 4-pin XLR male power connector, 12 V DC input
- LED speed display - optional
- 11-pin Fischer connector which accepts the external precision speed controls (ARRI compatible) that set the speed of the motor in increments as small as 0.001fps - optional.

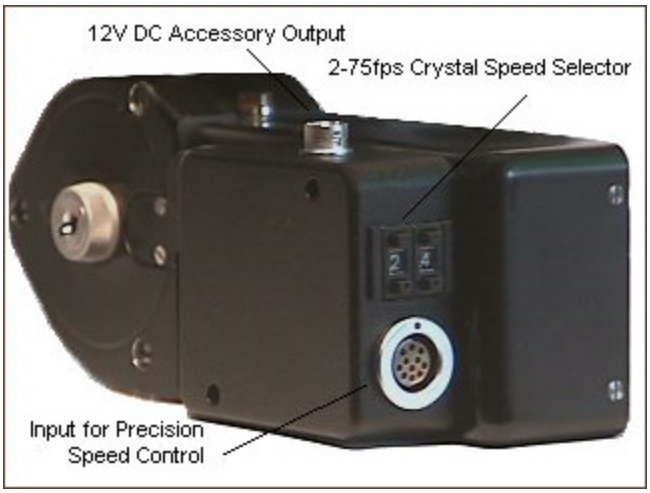
We can also modify this motor to enable crystal speeds from 8 to 40fps in 1fps increments set by push button decimal switches that replace the rotary variable speed selector.

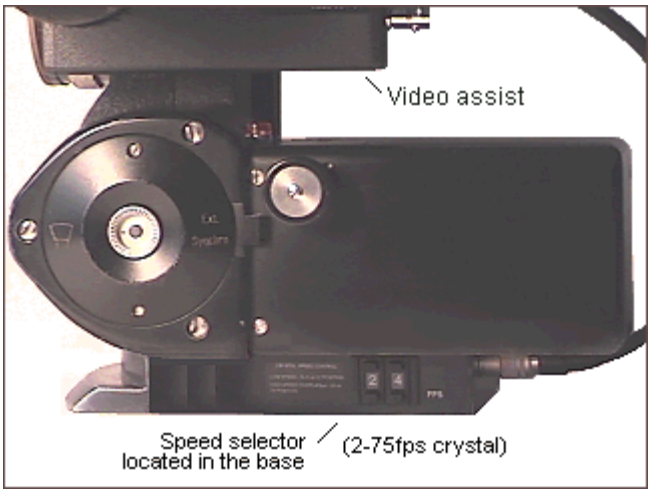
Digital Speed Display for Eclair NPR motor

This modification replaces the old analog speed indicator with a digital display.

Crystal Speed Control Type ACL 2-75FPS for Eclair ACL

This control is designed to work with the Thomson-CSF high speed motor. By pressing the pushbutton decimal switches, you can set the motor's speed from 2 to 75 frames per second in 1 fps increments. The 11-pin Fischer connector gives you compatibility with Arriflex 16SR camera accessories such as the precision speed control, which can set the speed of the motor in increments as small as 0.001fps. The crystal speed control with the speed selector and accessory connector can be attached to the motor or to the camera's base.

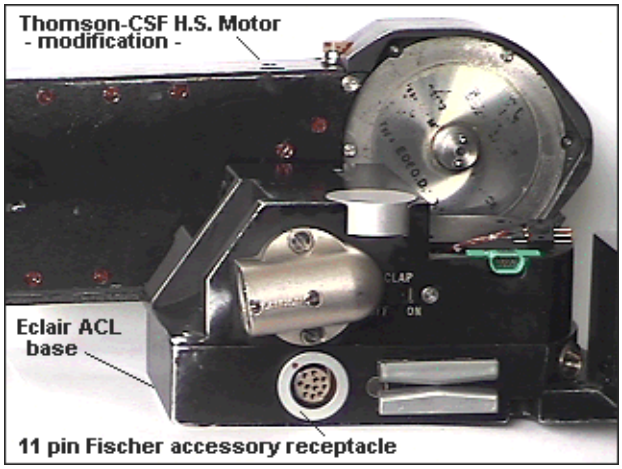




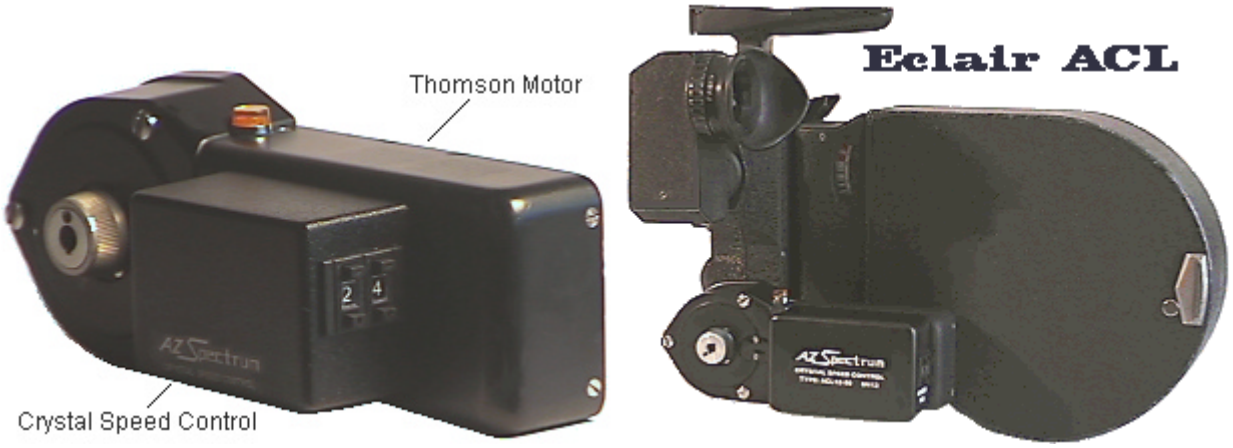
Pin configuration for the installation of the 11-pin Fischer receptacle:

Pin No. Signal

1. Signal Ground
2. Shutter Pulses (TTL)- output, 1 per frame
5. External Synch Enable- input
6. Tach. Pulses- output, 200 pulses per frame
7. Remote ON/OFF, motor will run if pin connected to +12 V (for ACL base only)
8. External Synch. (TTL)- input, 3200 pulses per frame
9. 0 volts from camera battery
11. +12 volts from camera battery



Crystal Speed Control Type ACL12-40FPS for the small Thomson motor.



Specifications:

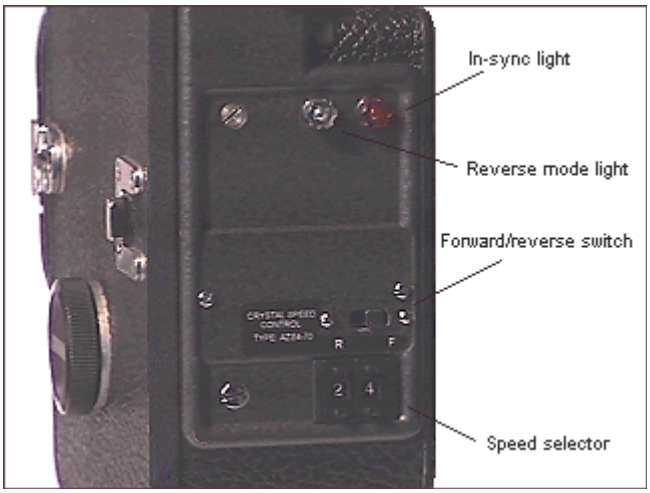
- Crystal speeds from 12 to 40 fps in 1 fps increments
- 2 digit pushbutton decimal speed switches
- Power requirement: 12 V DC

Crystal Speed Control for Eclair CM3 Constant Speed Motor

Specifications:

- Crystal speeds from 8 to 40 fps in 1fps increments
- 2-digit pushbutton decimal speed selector
- Sync warning LED
- 4-pin XLR male power connector
- 12 to 18 V DC input
- 11-pin Fischer connector which accepts the external precision speed controls (ARRI compatible) that set the speed of the motor in increments as small as 0.001fps - optional.

Internal Crystal Speed Control for the Bolex EBM Camera



Specifications:

- Crystal speeds from 4 to 60 fps in 1fps increments
- 2-digit pushbutton decimal speed selector
- Forward / reverse operations
- Power requirement: 12 V DC
- This unit completely replaces the old electronics of the Bolex EBM camera.

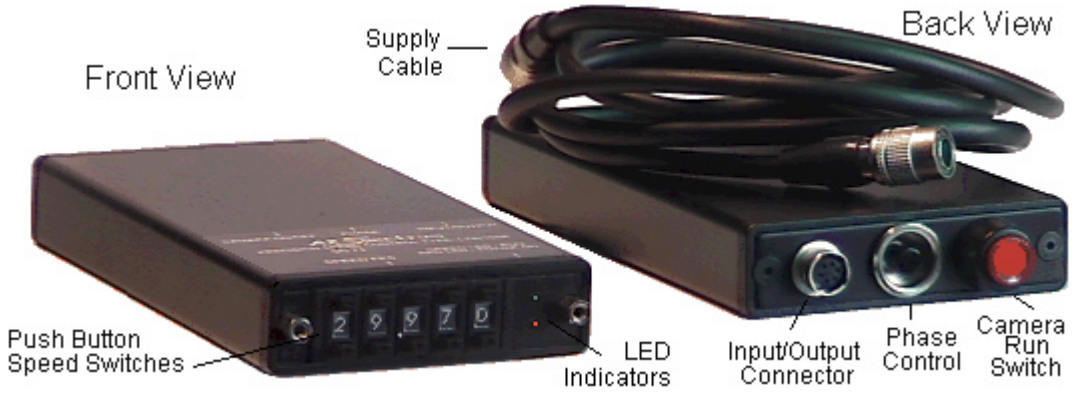
Crystal-Controlled Motor for the Bolex Cameras (Modified Original MST)

Specifications:

- Crystal speeds from 2 to 64 fps - decimal setting
- 2-digit pushbutton speed selector
- LCD two rows display - displays camera speed, footage counter and battery voltage
- 11-pin Fischer connector which accepts the external precision speed controls (ARRI compatible)
- 4-pin XLR male power connector
- The motor is ready for the AZ Spectrum computerized time lapse system

Precision Speed Control type LTR/16SR

This unit is designed to set precision crystal speeds for Arriflex 16SR and Aaton LTR/XTR cameras.



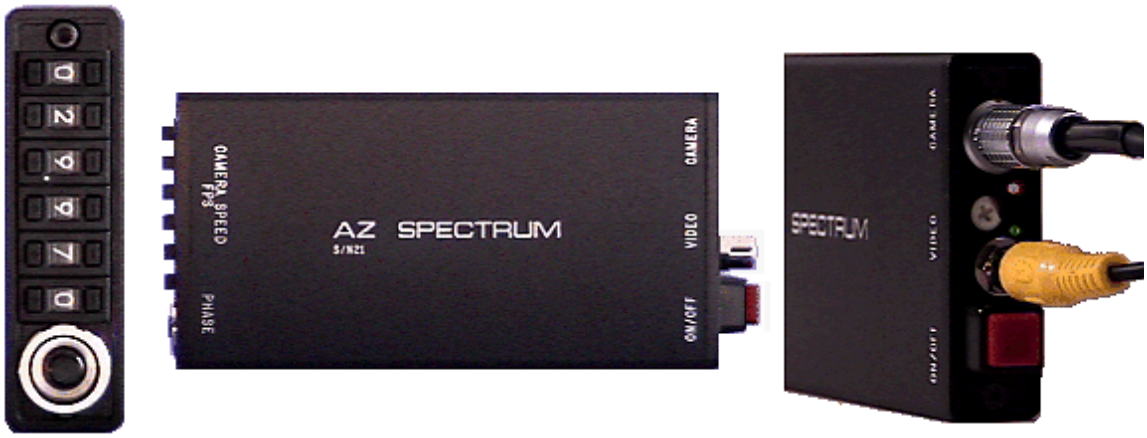
Specifications:

- Crystal speeds from 1.999 to 79.999 fps in .001 fps increments
- 5 digit push button decimal speed switches
- Phase shift button (synchronizes the film to monitor/projector images and HMI lights)
- Camera On/Off switch
- LED indicators: red - power ON, green - camera RUN
- Size: 5 x 2.7 x 0.75 inches
- Body: extruded aluminum (black)
- Power requirement: 10 to 17VDC (50mA), taken from the camera accessory connector.

Precision Speed Control PSC200

Synchronizes Arriflex, Aaton or Panavision cameras to:

- Video monitors: NTSC, PAL, SECAM
- Computer monitors
- HMI lights
- Projector images



Specifications:

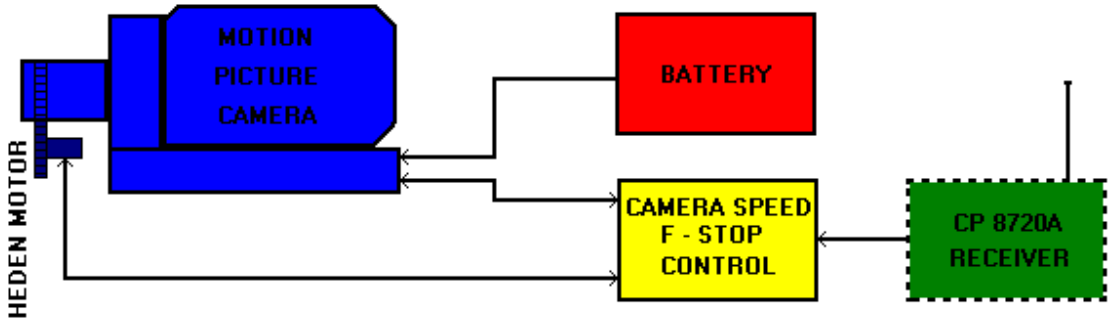
- Crystal speeds from 1.999 to 199.999 fps in .001 fps increments
- 6 digit push button decimal speed switches
- Phase shift button (synchronizing the film to a flickering image)
- Camera On/Off switch
- RCA input for auto synchronization to any video monitor. When filming a monitor and the video signal is connected to RCA input, the control will automatically phase the scan bar to the preset position for filming. This will provide scan bar free images without the need to phase each time the camera is turned on.
- Body: extruded aluminum (black). Size: 5 x 2.7 x 0.75 inches.
- Power requirement: 10 to 24VDC (65mA), taken from the camera accessory connector.

Camera speed / F-stop Control

This unit automatically adjusts aperture to a programmed change of shooting speed. It is designed to be used with the Arriflex, Aaton, and Panavision cameras.

Specifications:

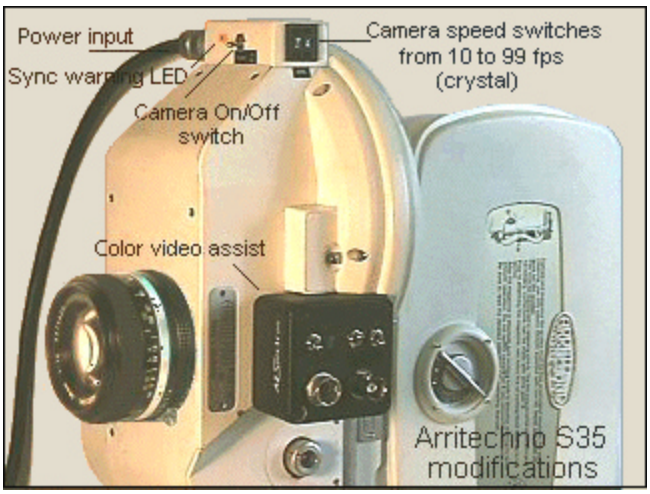
- F-stop changes automatically, following the change of the camera's speed
- 2 channels camera speed decimal settings: 1fps - 99fps (crystal)
- Decimal F-stop setting
- Power requirement: 12 or 24 V DC
- Power consumption: 1W (12 V DC) - Motor Stop, 6W - Motor Run
- Weight: 350g
- Body: extruded aluminum
- Finish: textured black



Indicators and Connectors:

- Led power indicator: lights when power is applied to the unit by camera.
- Remote input - 4 pin Lemo.
- Camera 8 pin Lemo: to camera accessories connector.
- Motor 5 pin Lemo: to Heden M26P motor.
- M.Dir red toggle switch: reverses motor direction.
- Led motor indicator: green light - forward, red light - reverse.
- Channel 1 input: starting camera speed in fps.
- Channel 2 input: ending camera speed in fps.
  Use channel 1 and 2 to select the desired starting and ending camera speed. The larger the difference of camera speeds between channel 1 and 2 with the same scale the longer the angle of motor rotation will be. This is appropriate to the camera speed and F-stop correlation.
- Blue toggle switch: to manually switch from channel 1 to 2.
- Ramp: length of time the transition will take from camera speed 1/camera speed 2.
- Offset input: changes the starting position of the servo motor.
- Scale input: controls the length of motor travel.

ARRITECHNO 35 Type 90 Camera modifications



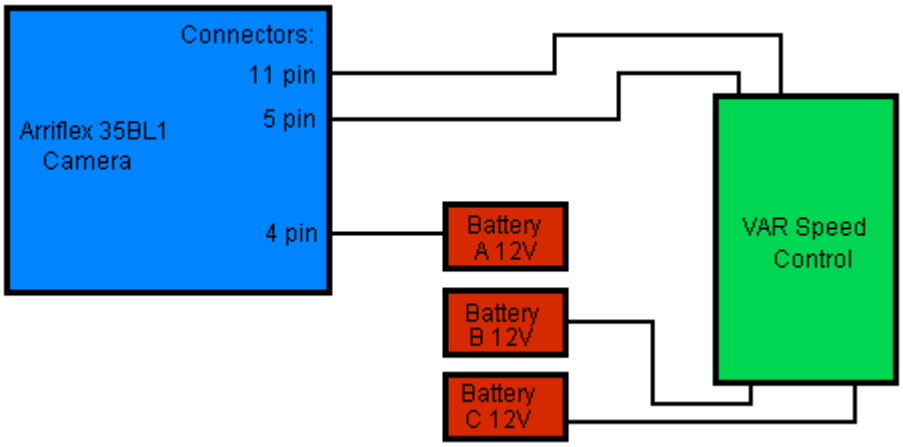
Specifications:

- Crystal speeds from 10fps to 99fps set by decimal switches in 1fps increments
- Input for Precision Speed Control and remote camera ON/OFF
- Sync warning red LED
- Flickerfree Color Video Assist System
- 3 pin Fischer Power Input Connector
- Power requirements: 24 V DC - top speed 40fps, 36 V DC - top speed 99fps
- Lens mount M48 x 0.75, shooting with Arriflex lenses with adapter
- Magazines: 200ft and 500ft
- Tripod thread: 3/8"
- Shutter (single blade): 172 degrees
- Exposure frame size: 24 x 18 mm

VAR Speed Control for Arriflex 35BL1 Camera

Specifications:

- Variable speed: 4 - 100 fps
- Camera ON/OFF switch
- Red LED power indicator
- Power requiement: 3 x 12 V DC



Crystal Speed Control for the Cinema Products GSMO Camera - modification

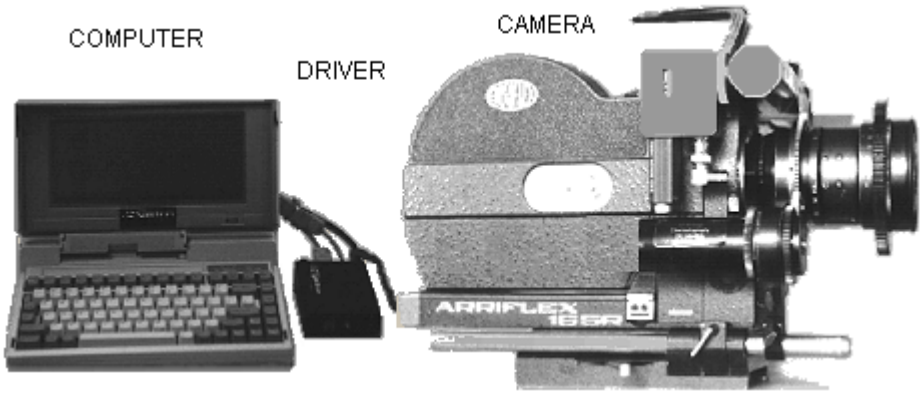
- Crystal speeds from 5 to 75 fps in 1fps increments
- 2-digit pushbutton decimal speed selector

Intervalometer

Specifications:

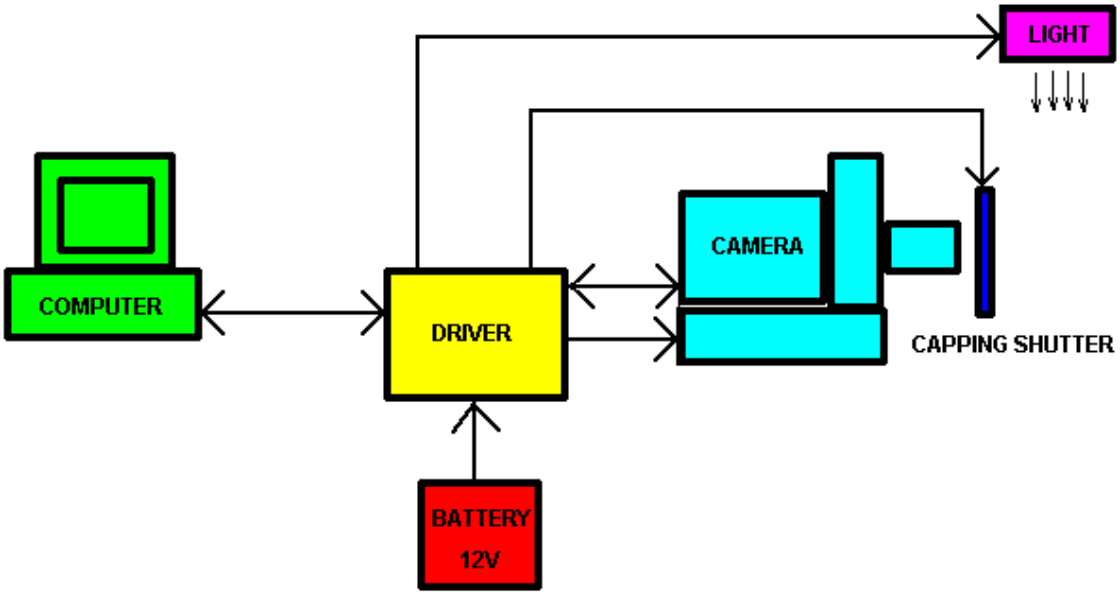
- Power requirement: 12 V DC
- Single frame/run mode
- Auto/manual mode
- LED 4 digit frame counter
- Intervals and exposure from 0.1 to 99.9 with adjustable units: seconds, minutes, hours, days
- Selection of 1 to 99 frames per pulse (package)
- pin XLR input connector
- pin D-Sub output connector
- DC motor driver built in
- Works with the camera internal motor (Arriflex 16SR, 35III, 35BL1, Mitchell Fries 35R)
- Size : 6.5 x 2.8 x 1.1 inches
- Body: extruded aluminum
- Finish: textured black

Computerized Time Lapse System



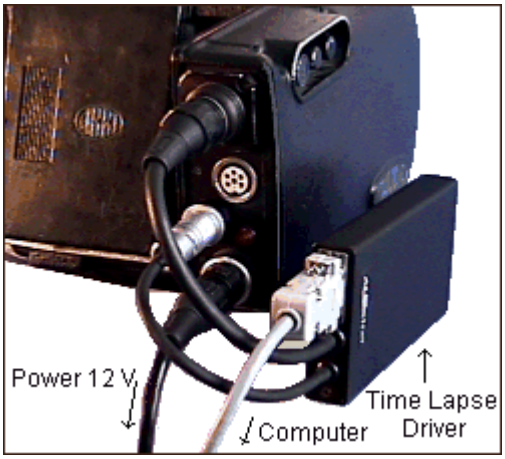
General Description:

This system is designed for the following cameras: Arriflex 35III, Arriflex 35BL1, Arriflex 16SRII, Mitchell Fries 35R and Bolex with a modified MST motor. The driver is connected to the camera's internal DC motor. A computer (PC) controls the system by using a standard parallel port (printer port) or serial port (COM 1-4).



Specifications:

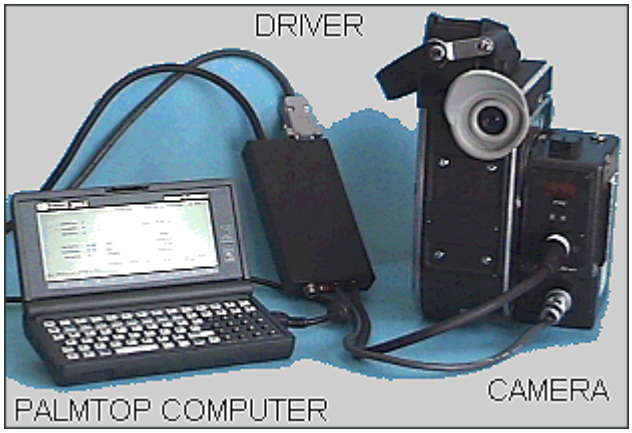
- Power: 12 V DC (24 V DC for Mitchell)
- Forward/reverse operations (except the Arriflex 35BL1 camera)
- Frame counters and timers displayed on the computer screen
- Intervals from 0.01 sec to infinity at 0.01 sec increments
- Exposure from 0.10 sec to infinity at 0.01 sec increments
- Selection of 1 to 32768 frames per pulse (package)
- Intervals, exposure and package can be used at constant or variable modes; can be correlated to the last frame with mathematical functions (linear, exp, log). Correlation to the intensity of light, to the frame counters and to the daily time is optional.



The driver's connections to the Arriflex 35BL1 camera.

Computerized time lapse system for the Bolex camera

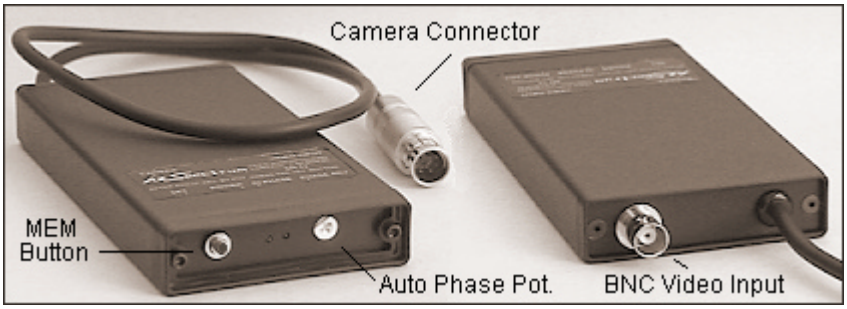
The driver is connected to the crystal-controlled motor. An IBM compatible palmtop computer controls the system by using a standard serial port.



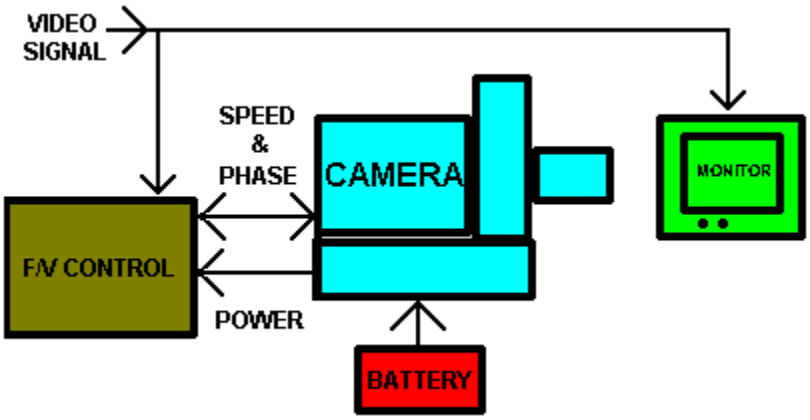
Specifications:

- Forward/reverse operations
- Frame counters and timers displayed on the computer screen
- Intervals from 0.01 sec to infinity at 0.01 sec increments
- Exposure from 0.12 sec to infinity at 0.01 sec increments
- Selection of 1 to 32768 frames per pulse (package)
- Intervals, exposure and package can be used at constant or variable modes; can be correlated to the last frame with mathematical functions (linear, exp, log). Correlation to the intensity of light, to the frame counters and to the daily time is optional

Film/Video NTSC-PAL Synchronizing Control



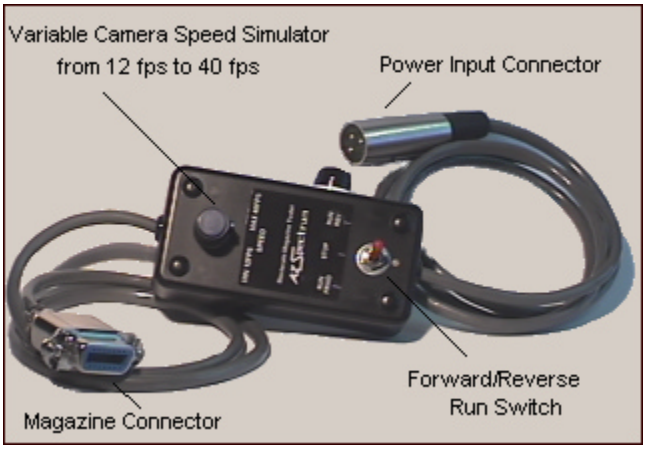
This F/V control unit automatically synchronizes the motion picture camera to any NTSC or PAL video monitors. When filming a monitor and the video signal is connected to BNC input, the control will set the camera speed and automatically phase the scan bar to the preset position for filming. This will provide scan bar free images without the need to phase each time the camera is turned on.



Specifications:

- Works with Arriflex, Aaton and Panavision cameras
- BNC input connector for auto synchronization to a video monitor
- SYNC (green) and POWER (red) warning LEDs
- MEM calibration button and AUTO PHASE POT for calibration the F/V control to the motion picture camera
- Auto phase is accomplished in 2 seconds after the camera starts running
- Size: 5 x 2.7 x 0.75 inches
- Body: extruded aluminum (black)
- Power requirement: 10 to 24 V DC (40mA)

Moviecam Magazine Tester



This unit allows you to test (run) the Moviecam magazine motor and counters without connection to the camera.

Power Split Box 24/12 V DC

Specifications:

Input: 24 V DC, (maximum current 3A); 3 pin Fischer Plug

Outputs:
Two 24 V DC outputs; 3 pin Fischer Sockets
Three independent 12 V DC, 1.5 A outputs with short-circuit protection; 11 pin Fischer Sockets
The total power from all outputs should not exceed 65W
Size: 2" x 2" x 1.25"
Body: extruded aluminum (black)

The output sockets are wired as follows:

3 pin Fischer
PIN 1 : GND
PIN 2 : +24 V
PIN 3 : /ERUN

11 pin Fischer
PIN 9 : GND
PIN 11 : +12 V

350W Camera Power Supply

Specifications:

- Output:
  Channel 1 (main): 24 V DC, 15A; XLR3 receptacle, pins 1+, 2-
  Channel 2: 12 V DC, 2A; XLR4 receptacle, pins 1-, 4+
- Input: 90-132 V AC/180-264 V AC, 47-440 Hz -autoranging.
- Ripple and Noise: channel1: 50 mV P-P max, channel 2: 20 mV P-P max .
- Operating Temperature: 0-50°C at full rated load. Unit is equipped with overtemperature shutdown.
- Overvoltage Protection : OVP on main output is set between 1 to 2 V. This protection is reset by recycling input power.
- Overload Protection: All outputs are protected against overload and short circuit conditions. Recovery is automatic when load is reduced.
- Power good LEDs indicators.
- On/off switch.
- Body: Black anodized aluminum.
- Sixe: 3.5 x 8 x 16.7 inches.
- Weight: 10 lbs.

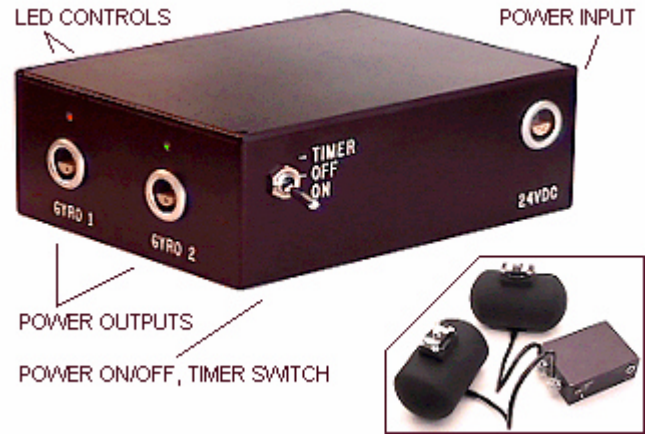
2x120W Camera Power Supply

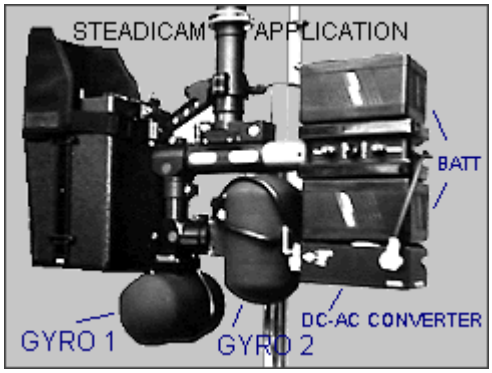
Specifications:

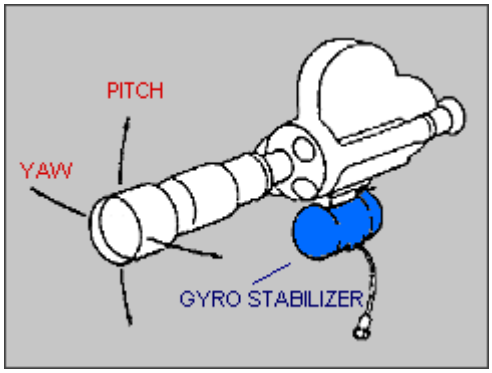
- Output:
  Channel 1: 12 V DC, 10 A; XLR4 receptacle, pins 1-, 4+
  Channel 2: 12 V DC, 10 A; XLR4 receptacle, pins 1-, 4+
- Input: 115 V AC/60 Hz or 220 V AC/50 Hz
- Ripple and Noise: 50 mV P-P max.
- Operating Temperature: 0-50°C at full rated load.
- Overvoltage Protection : OVP on outputs is set between 1 to 2 volts. This protection is reset by recycling input power.
- Overload Protection: All outputs are protected against overload and short circuit conditions. Recovery is automatic when load is reduced.
- Power good LEDs indicators.
- Power On/Off switch.
- Body: Black anodized aluminium.
- Size: 3.5 x 8.4 x 10 inches.
- Weight: 6 lbs

DC/AC Converter for Kenyon Gyro Stabilizers

The AZ Spectrum 115 V AC , 400 Hz DC-AC Converter supplies power for two Kenyon Gyro Stabilizers. The Kenyon Gyro Stabilizer is designed for quick attachment to any hand-held optical device, to remove the tremors so damaging to target identification and photographic detail sharpness. Very small angular deflections in pitch and yaw caused by tremors and vibrations, result in relatively large sweeps across the target, inevitably blurring the image. Twin rate gyros mounted on crossed axis sense these motions and dynamically resist displacement through gyroscopic precession. The gyros operate in a low vacuum helium atmosphere within a hermetically sealed casing. Threefold benefits are realized throught this technique - protection from hostile environment, motor heat conduction to surface, and reduction of aerodynamic drag of the gyro wheel, to attain 21,000 RPM with minimum power input. For more info about Kenyon Gyro Stabilizers please contact: Kenyon Laboratories LLC, 11 Scovil Rd, Higganum, Connecticut 06441, tel:800-253-4681, web: www.ken-lab.com







Specifications for DC-AC Converter:

- Input Voltage: 24 V DC
- Output Voltage: 115 V AC
- Output Frequency: 400 Hz
- Output Power: two channels, 30 W per channel
- High Operating Efficiency: 94%
- Safe Energy Mode: This mode can be used if the gyro reaches maximum speed. The output power is alternately switched between channels every 20 seconds. This mode saves 50% of the battery's energy with full operation of the gyro system.
- Dimensions: 4.4 x 3.4 x 1.6"
- Body: Black anodize aluminum

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